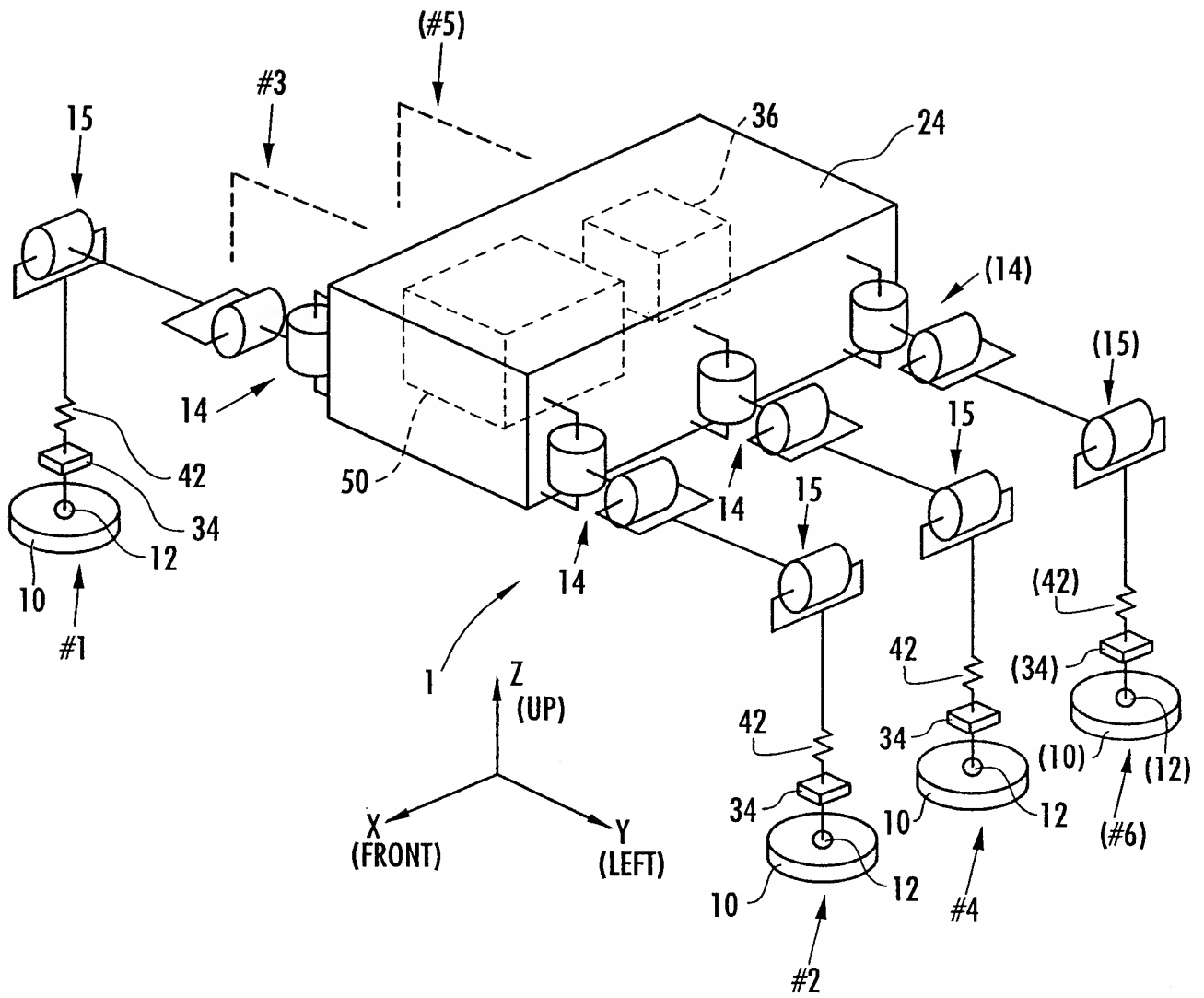


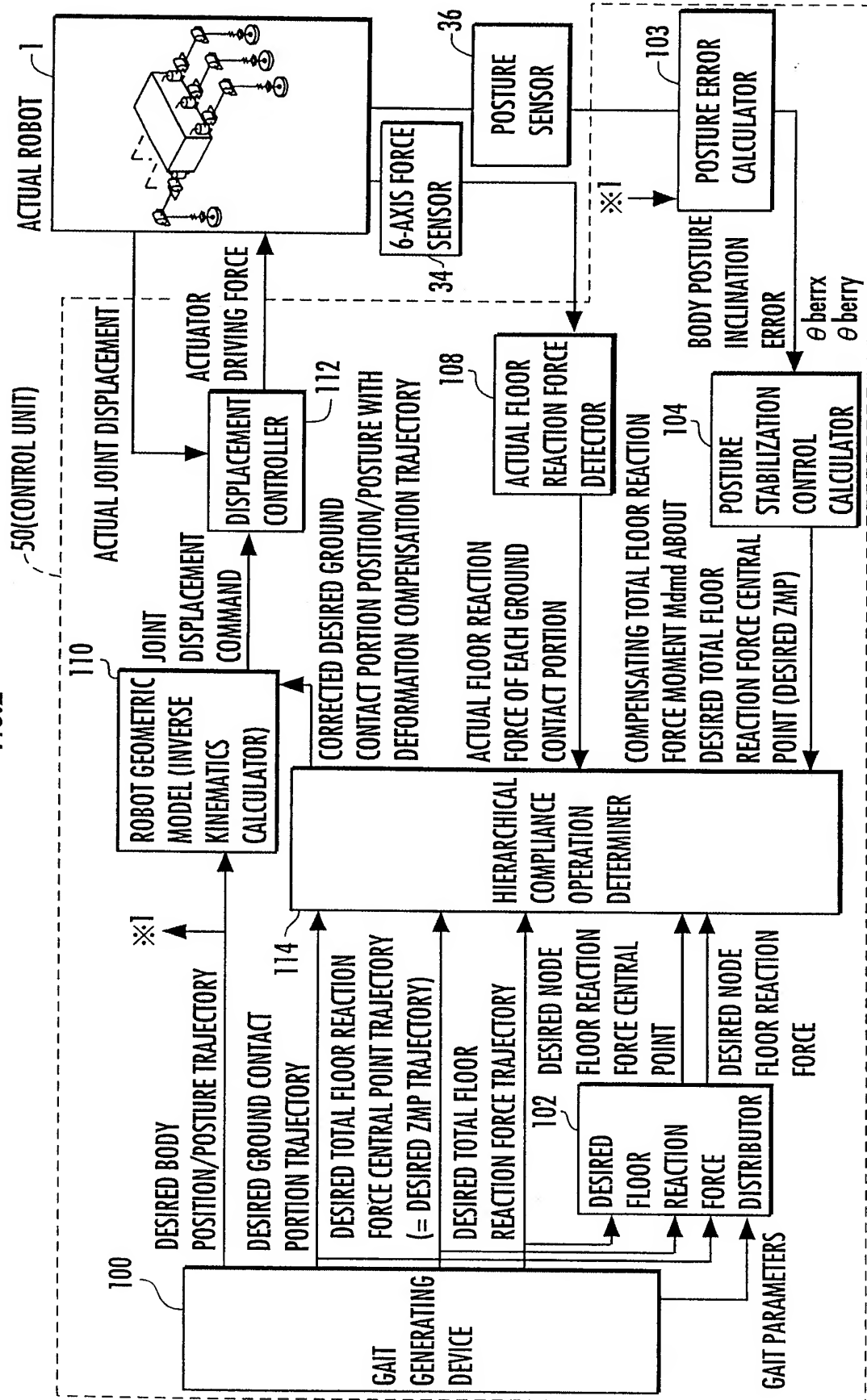
1 / 55

FIG.1



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FIG.2



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FIG.3(a)

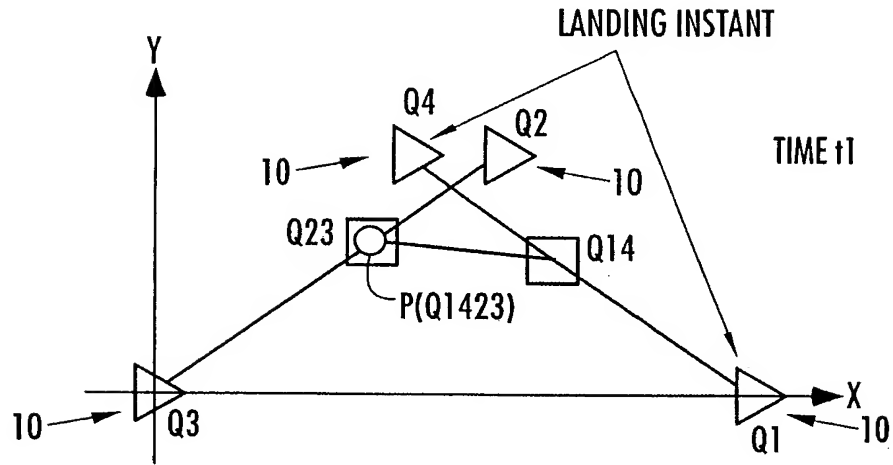


FIG.3(b)

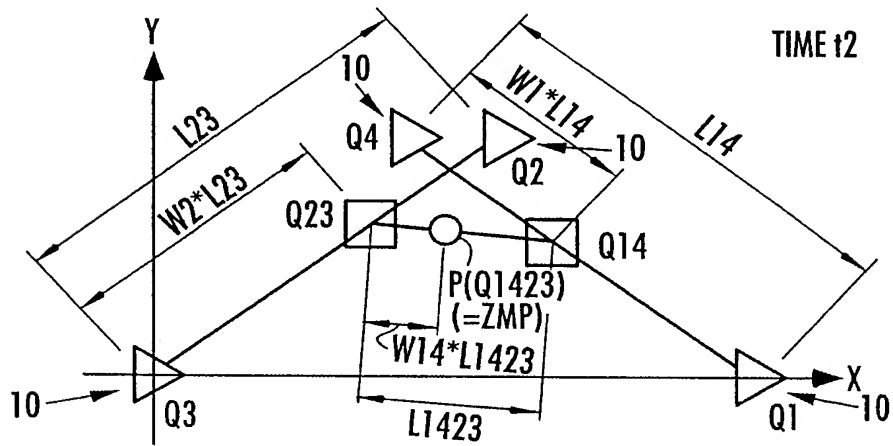
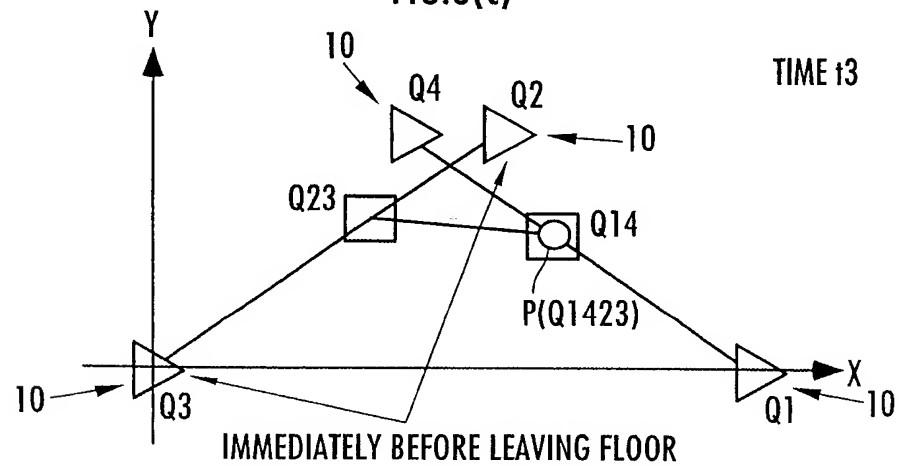


FIG.3(c)



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FIG.4(a)

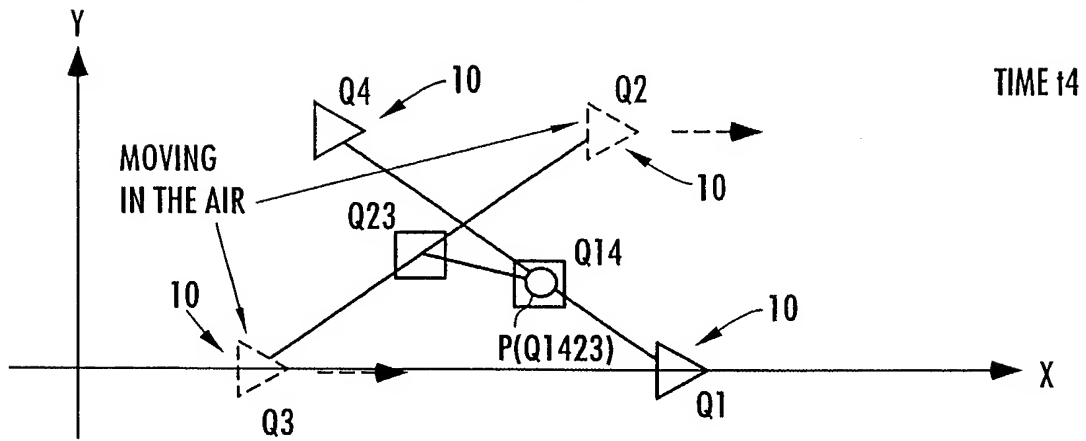


FIG.4(b)

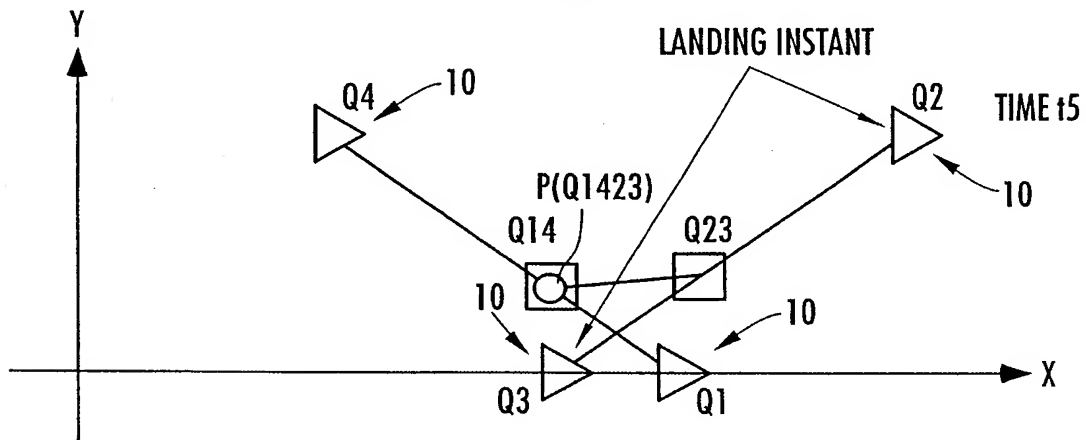
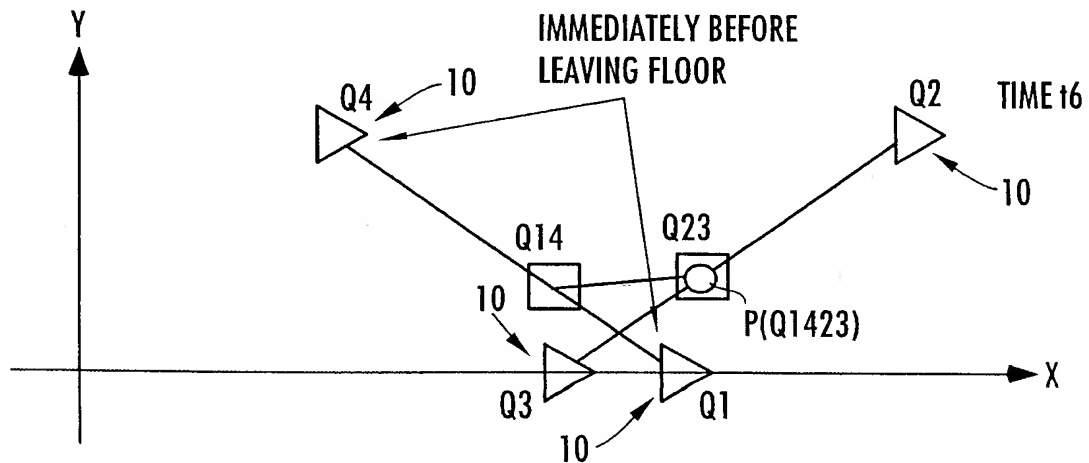


FIG.4(c)



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FIG.5(a)

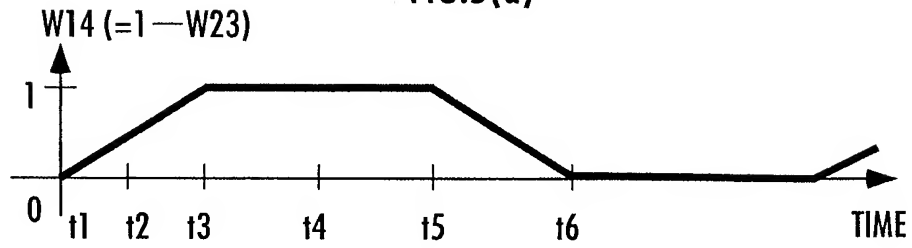


FIG.5(b)

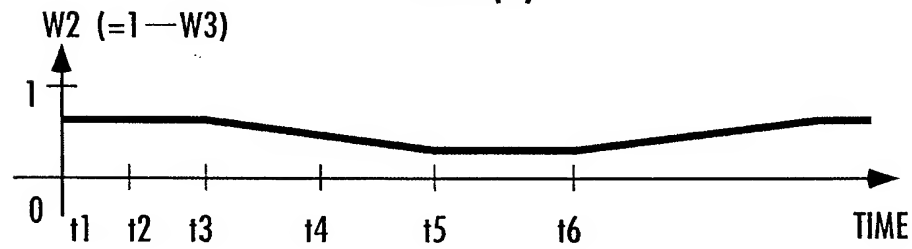


FIG.5(c)

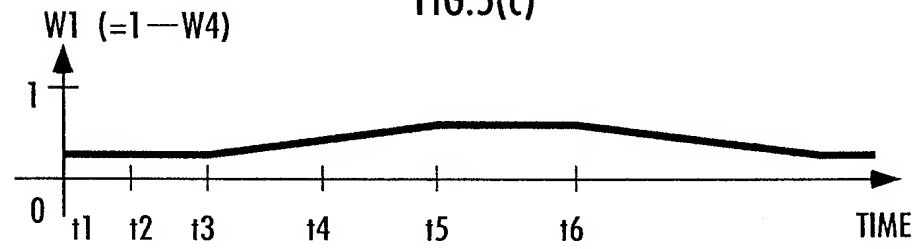
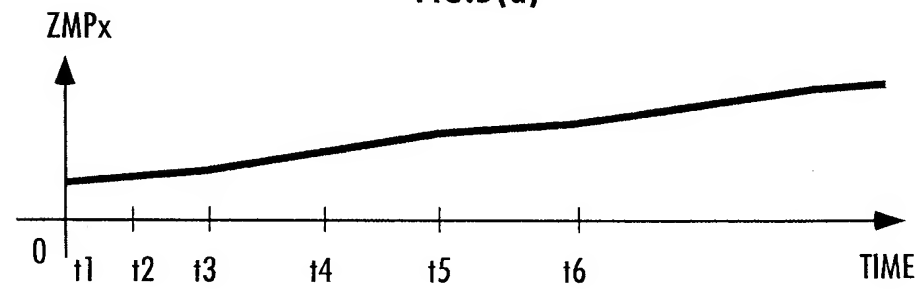


FIG.5(d)



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FIG.6
1423RD NODE

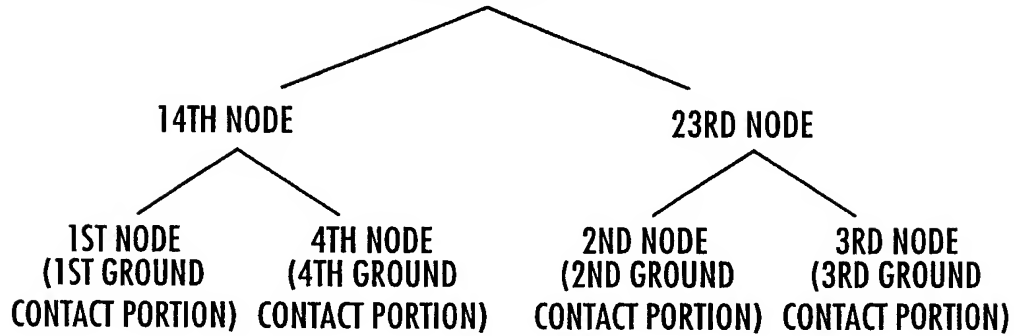
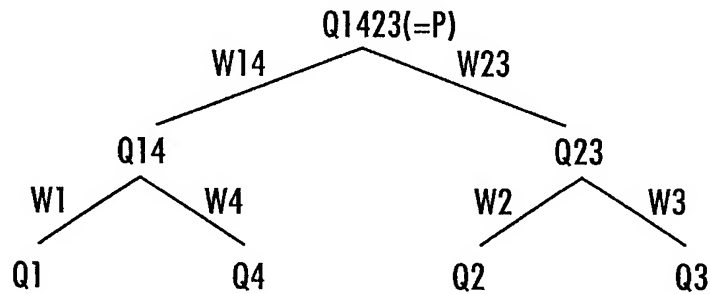


FIG.7



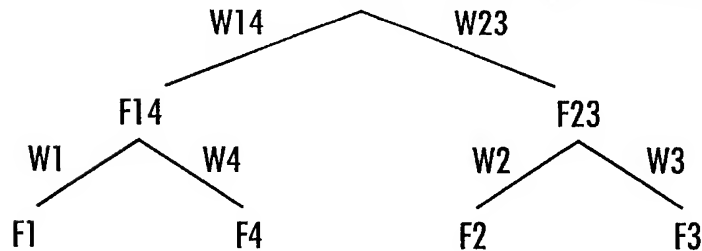
$$Q14 = W1 \cdot Q1 + W4 \cdot Q4$$

$$Q23 = W2 \cdot Q2 + W3 \cdot Q3$$

$$Q1423 = W14 \cdot Q14 + W23 \cdot Q23$$

FIG.8

F1423(=DESIRED TOTAL FLOOR REACTION FORCE $F_{totalref}$)



$$F1 = W1 \cdot W14 \cdot F_{totalref}$$

$$F4 = W4 \cdot W14 \cdot F_{totalref}$$

$$F2 = W2 \cdot W23 \cdot F_{totalref}$$

$$F3 = W3 \cdot W23 \cdot F_{totalref}$$

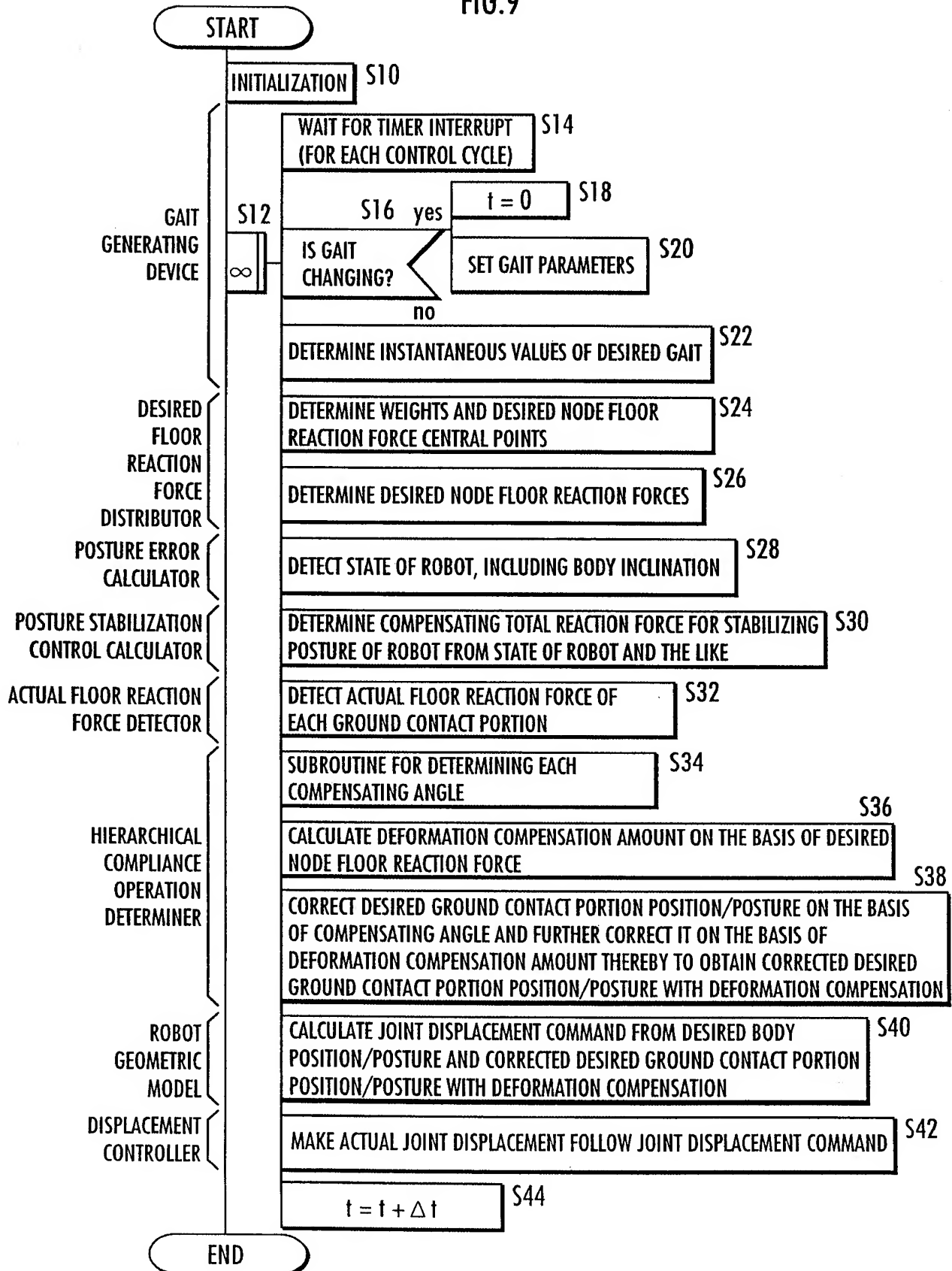
$$F14 = F1 + F4$$

$$F23 = F2 + F3$$

$$F1423 = F14 + F23$$

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FIG.9



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FIG.10

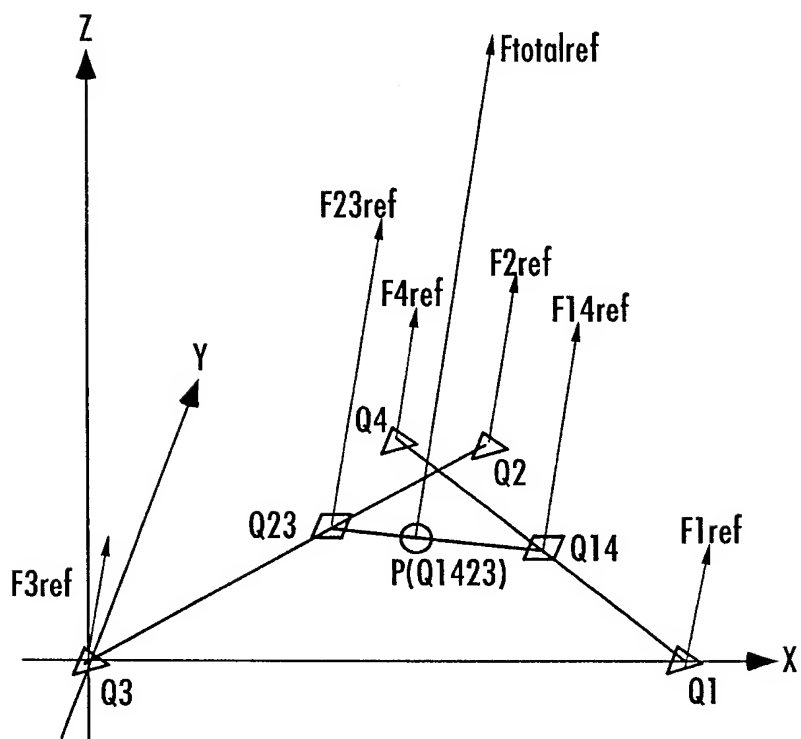
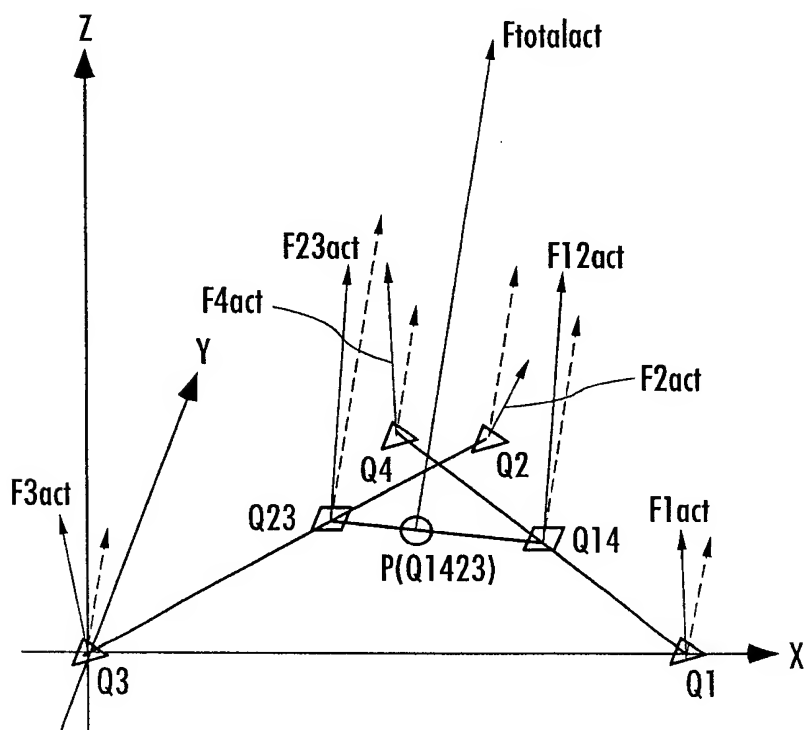


FIG.11



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FIG.12

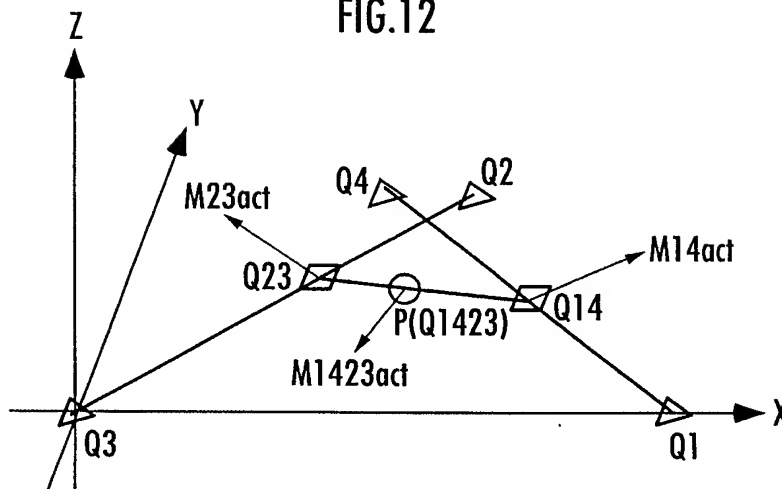


FIG.13

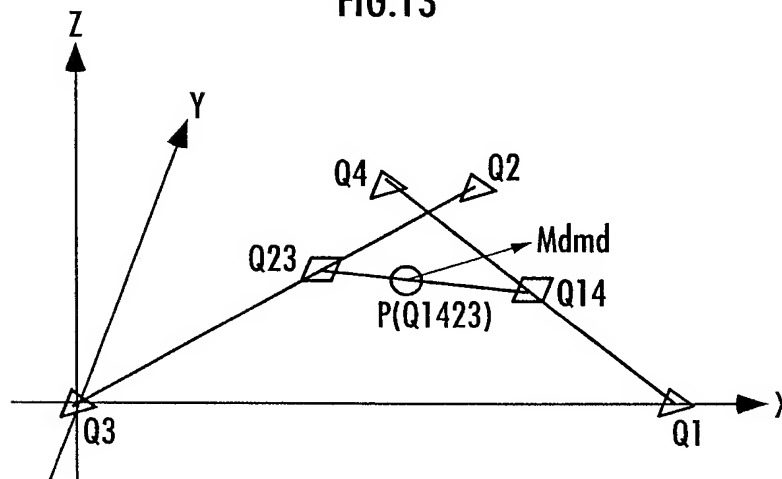
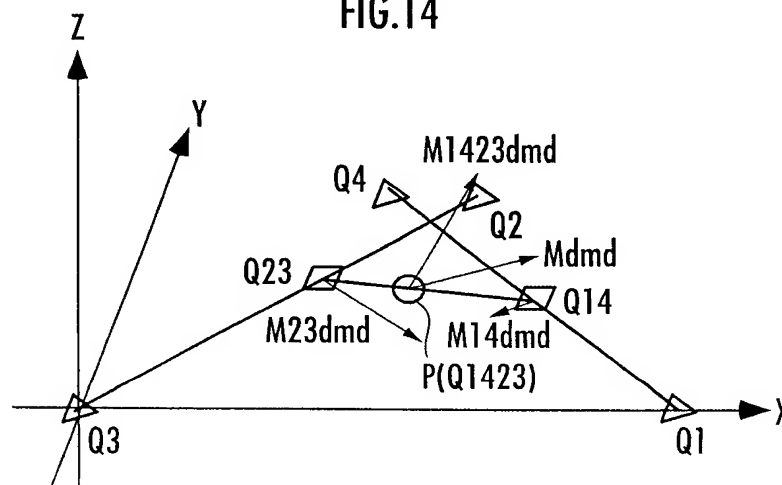


FIG.14



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FIG.15

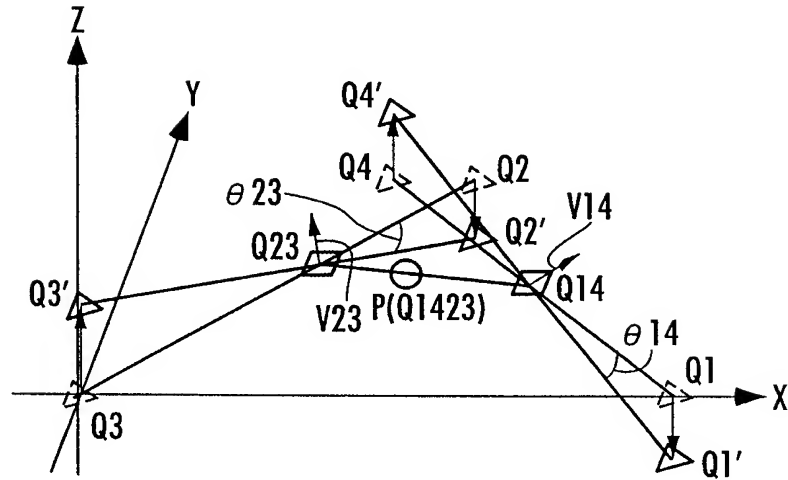
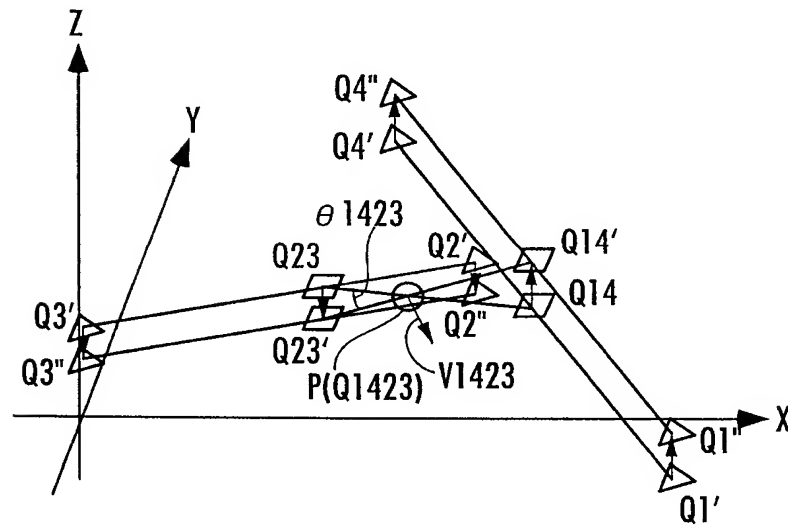
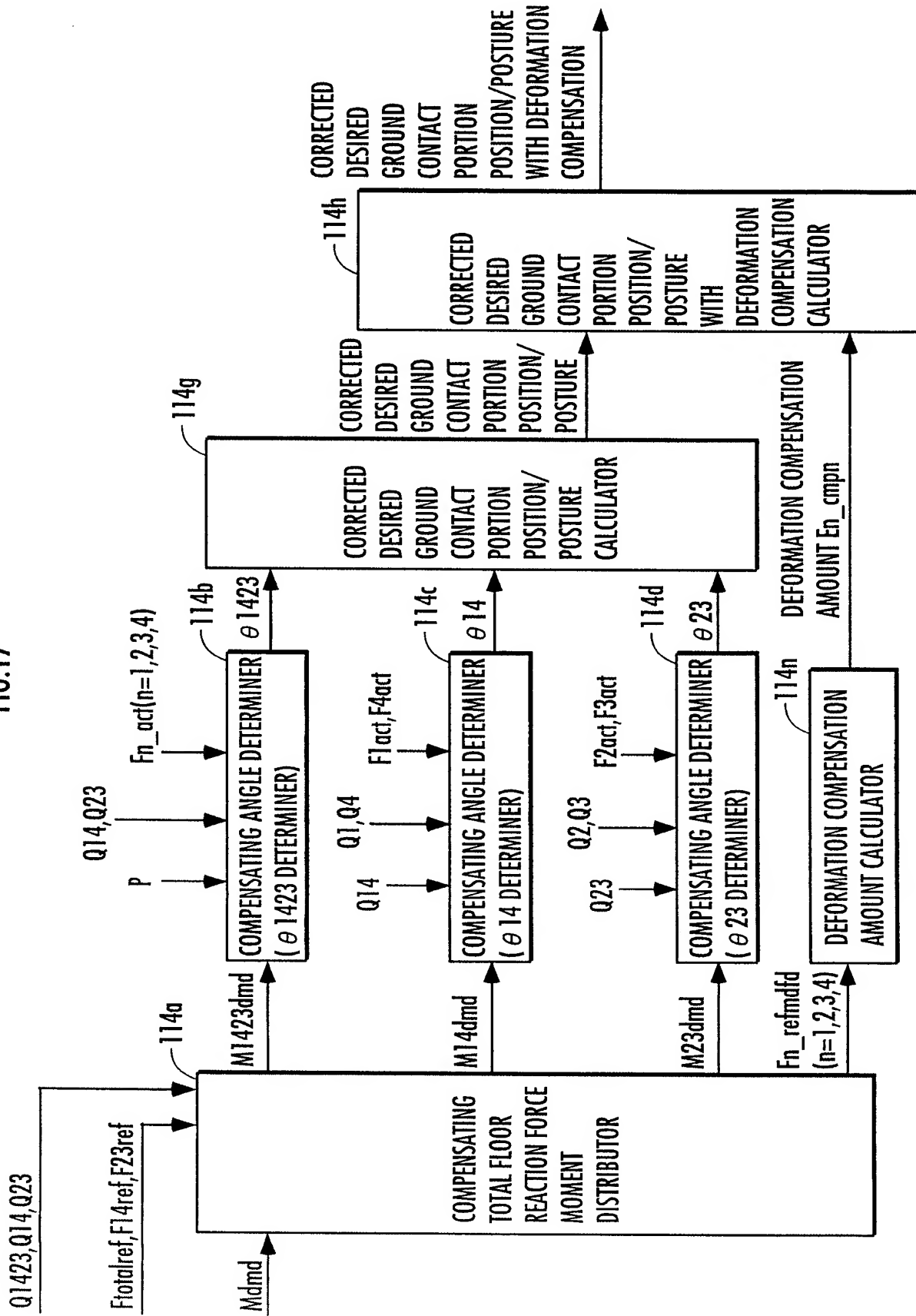


FIG.16



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FIG.17



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FIG.18

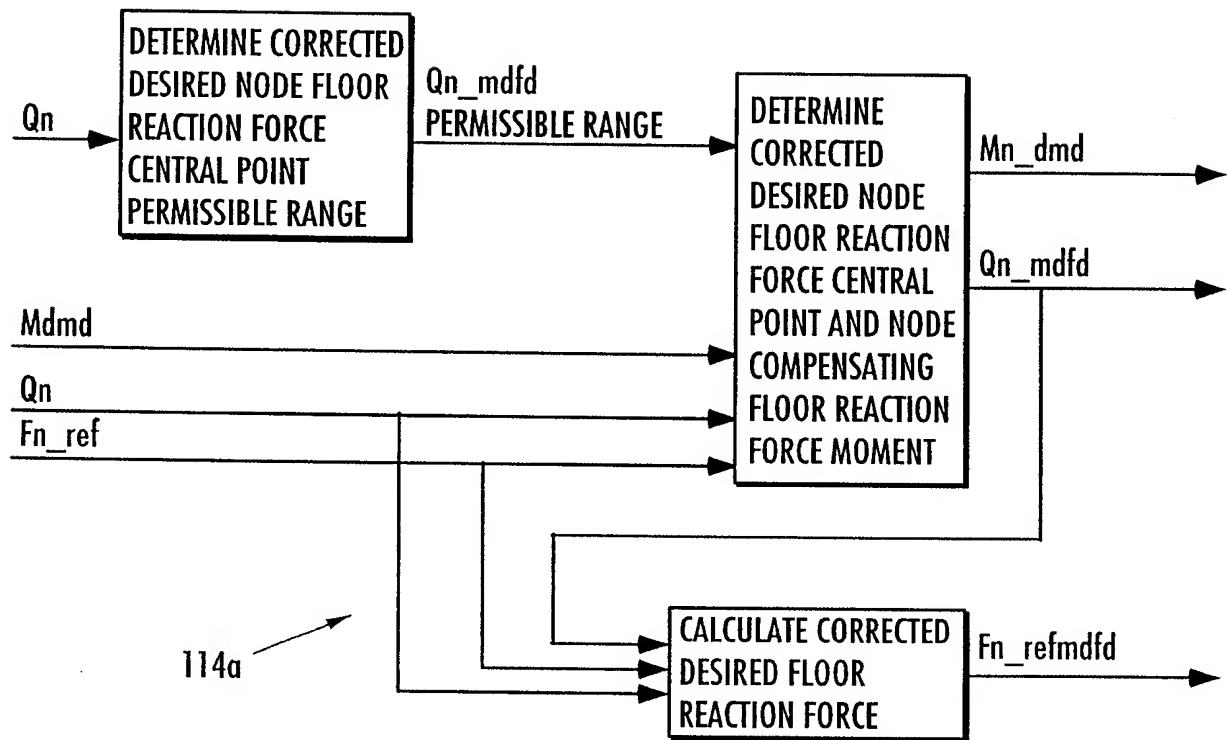


FIG.19

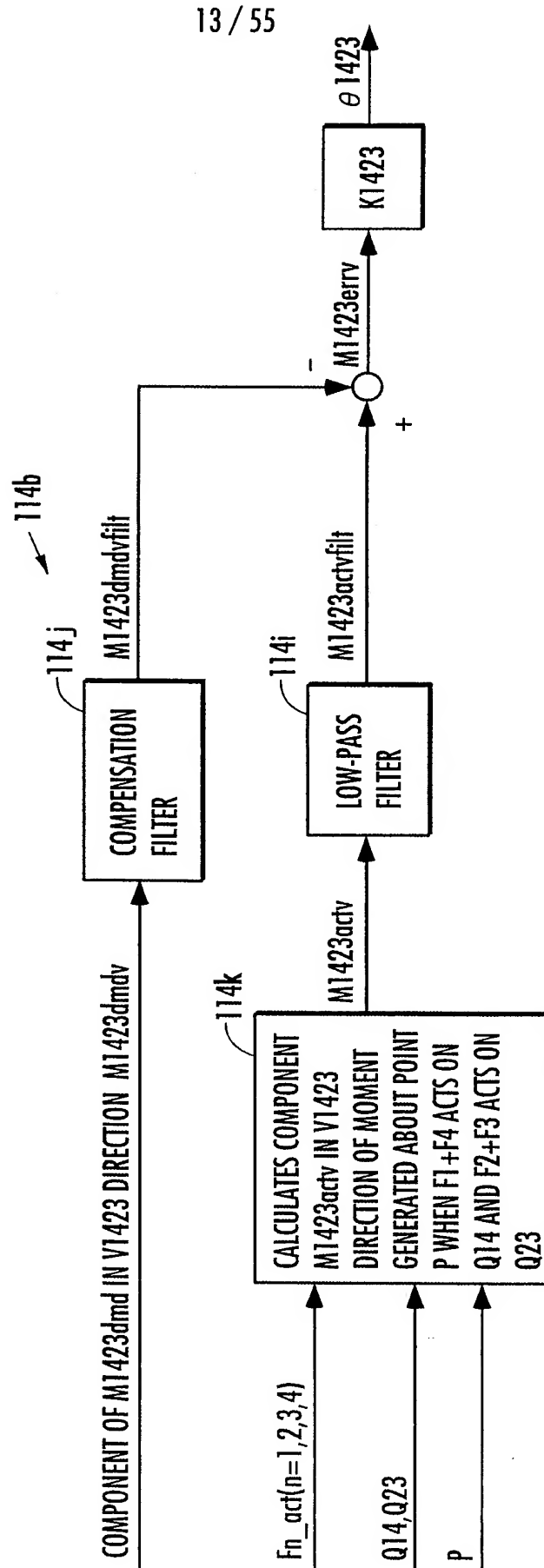
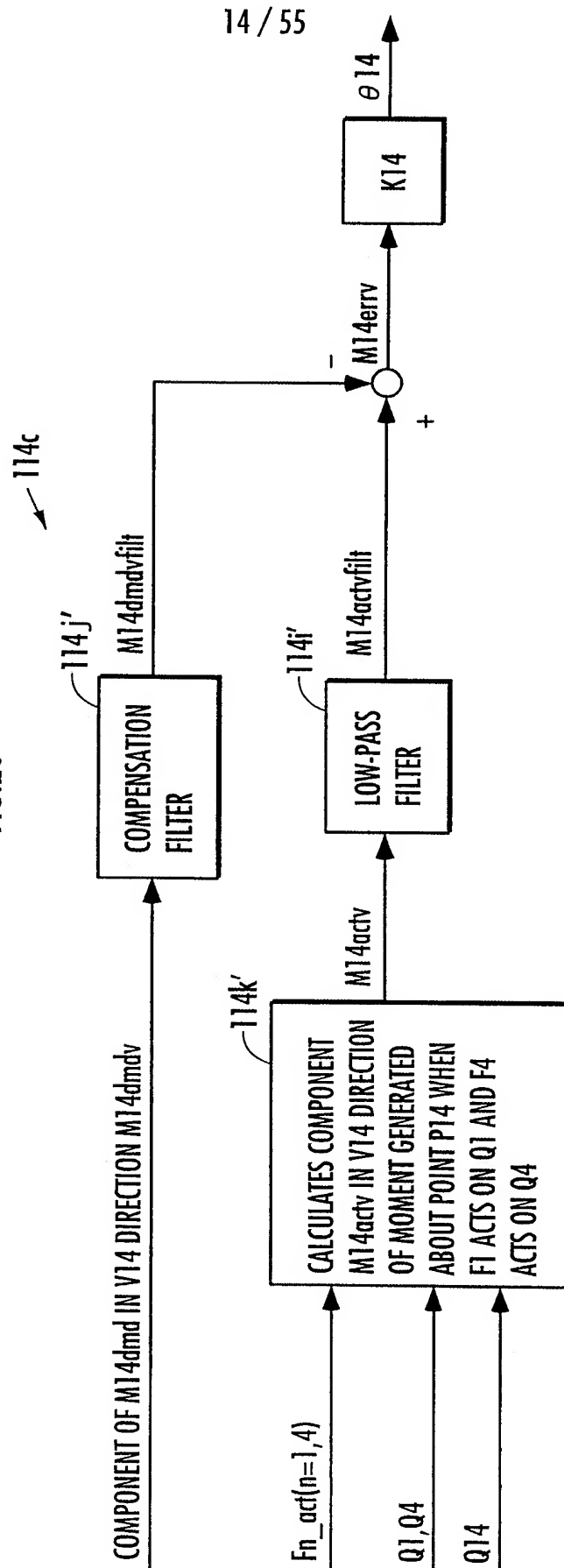
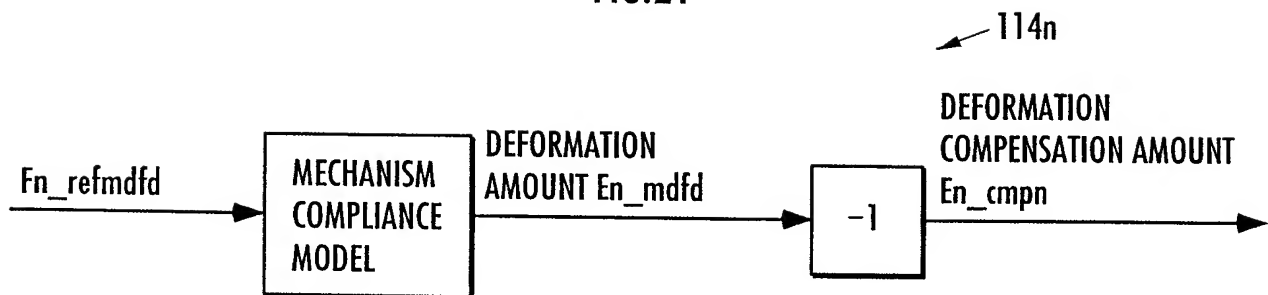


FIG.20



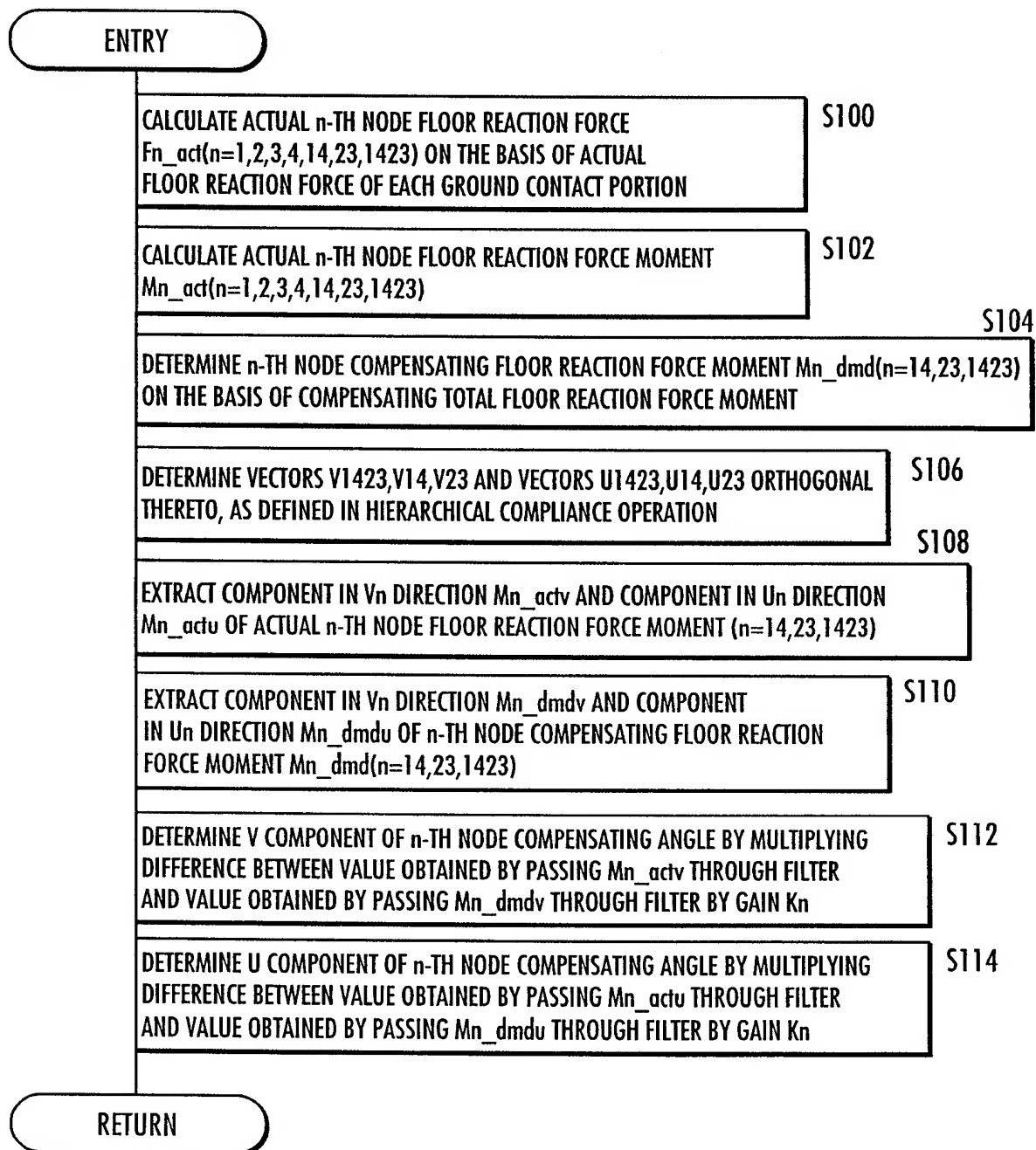
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FIG.21



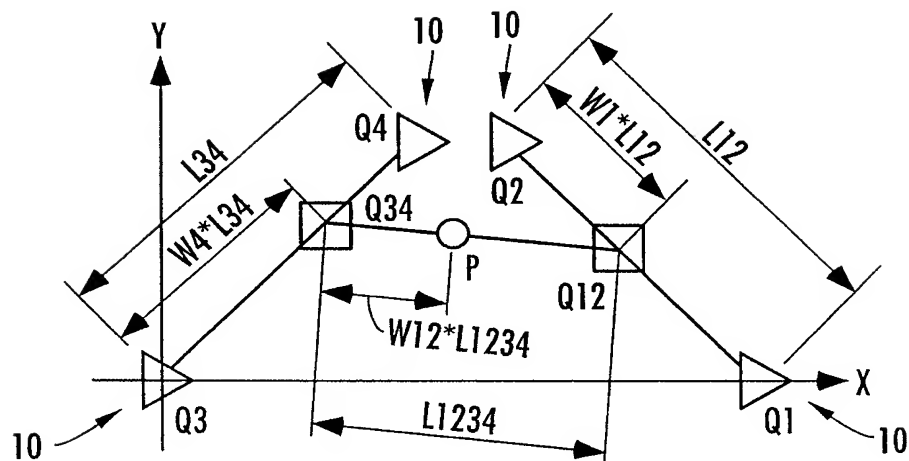
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FIG.22



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FIG.23



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FIG.24

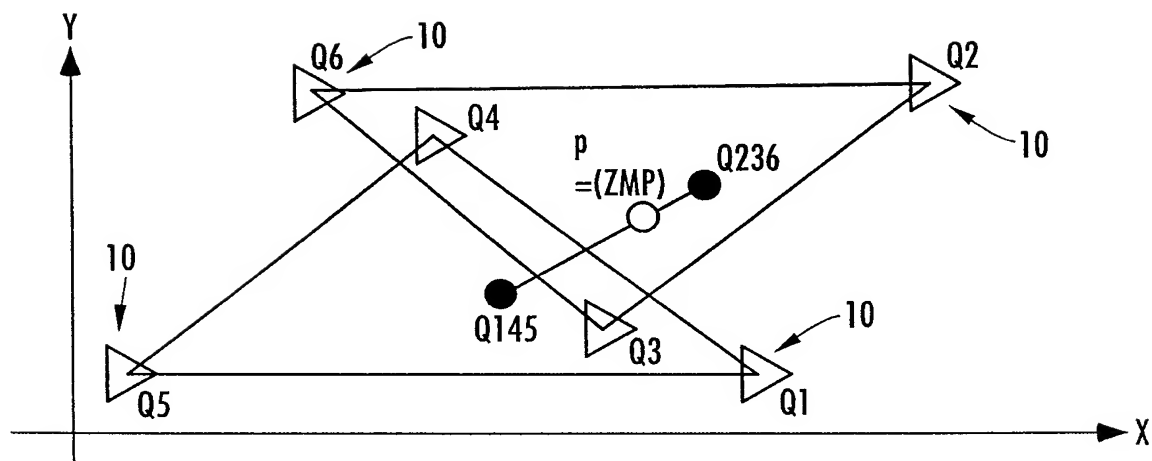
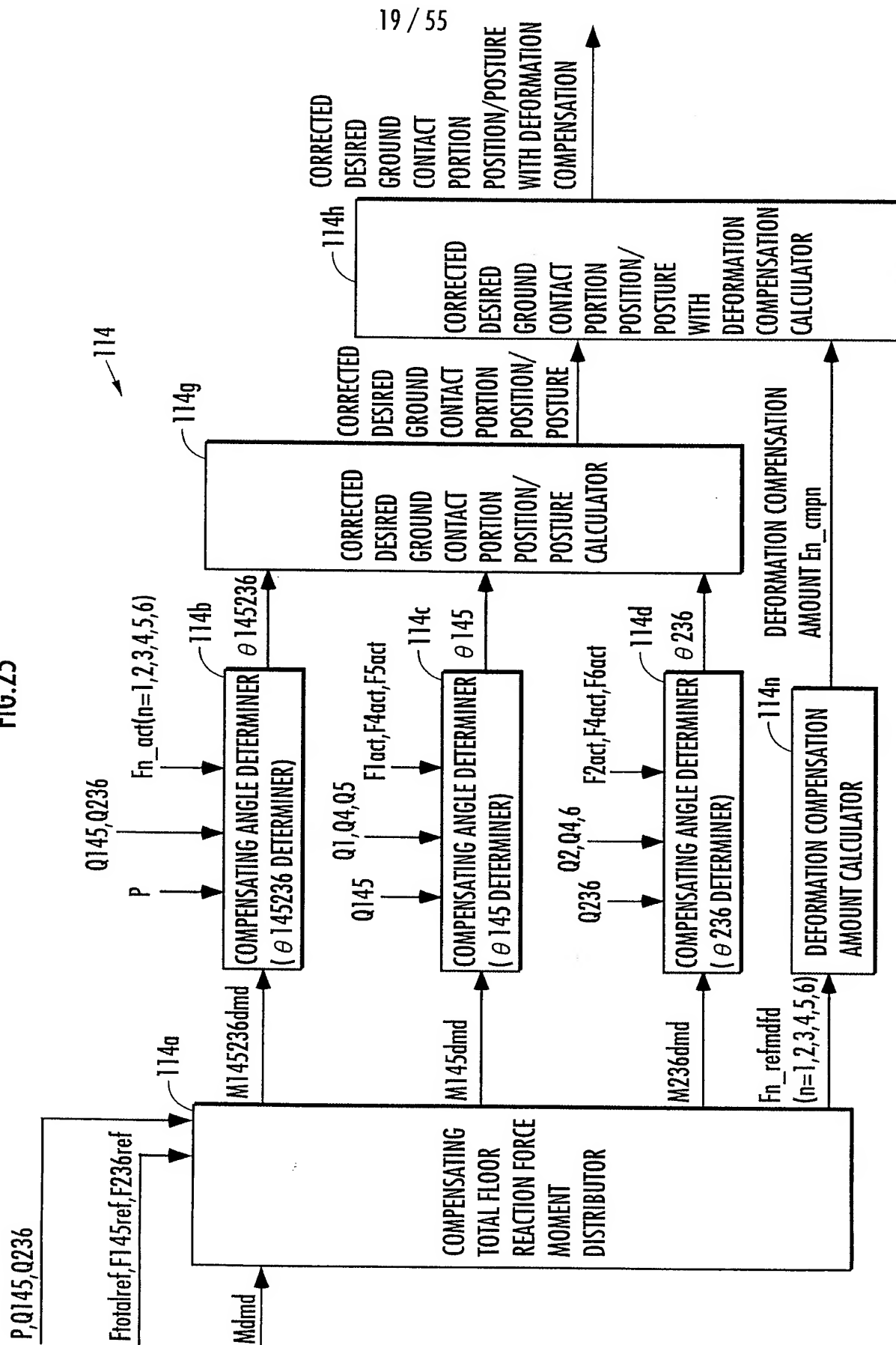


FIG. 25



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FIG.26

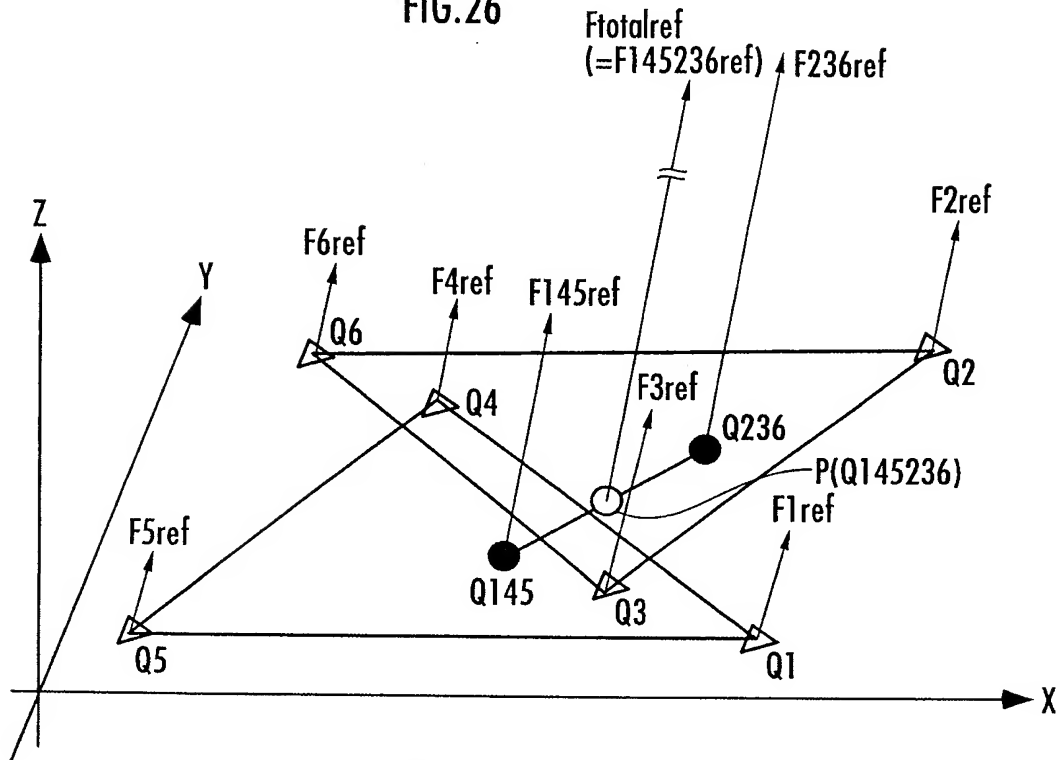
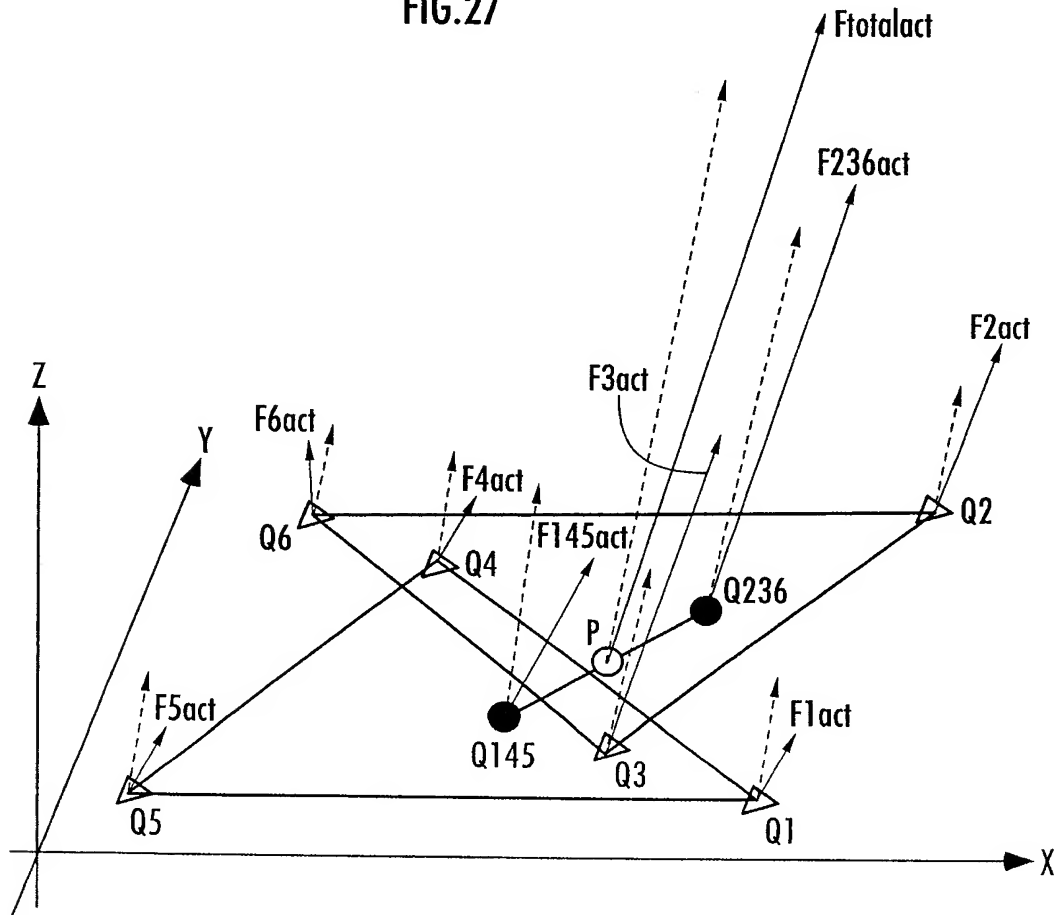
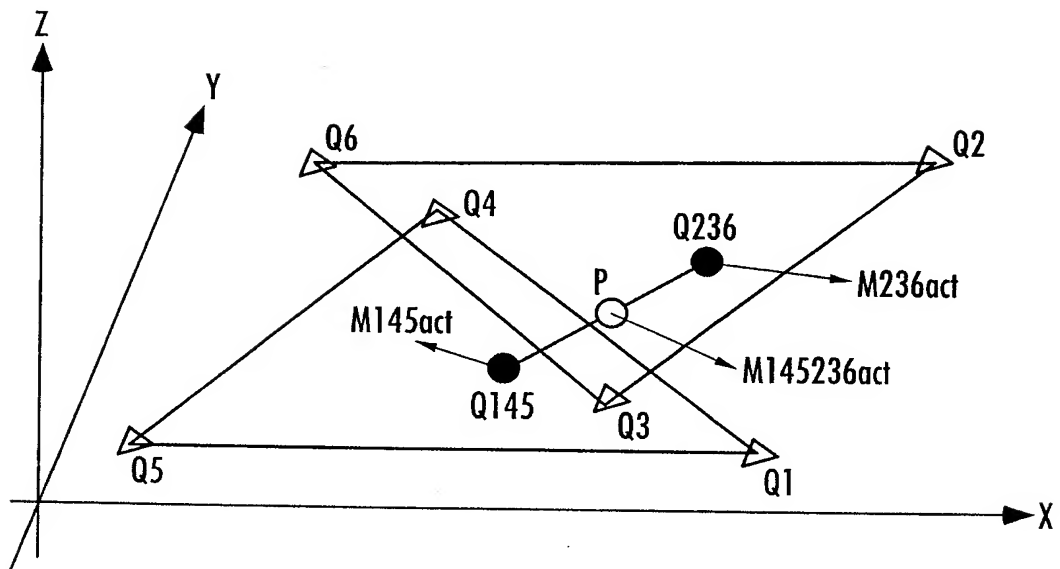


FIG.27



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FIG.28



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FIG.29(a)

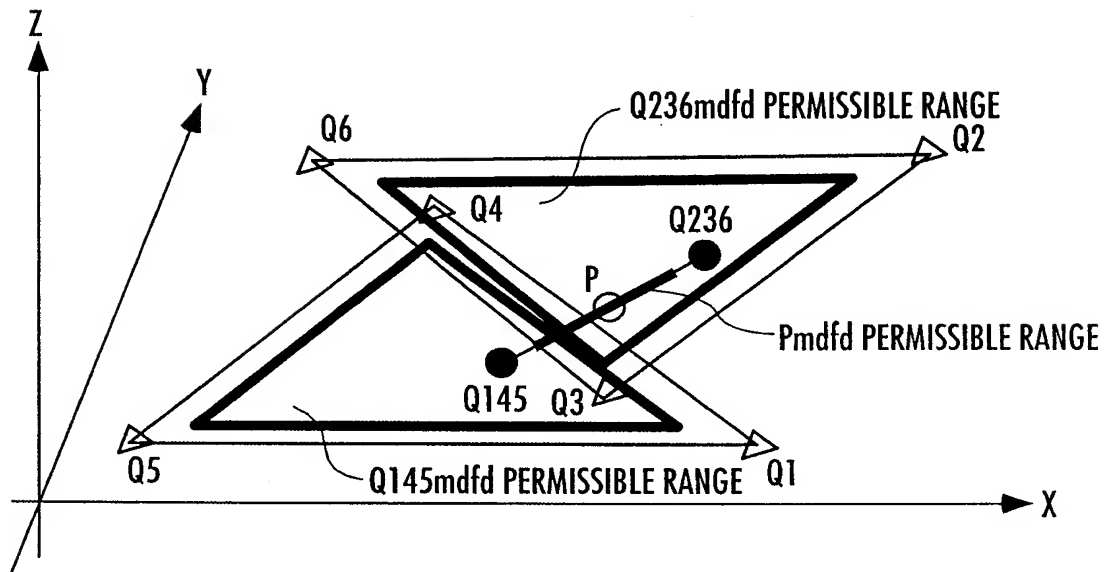
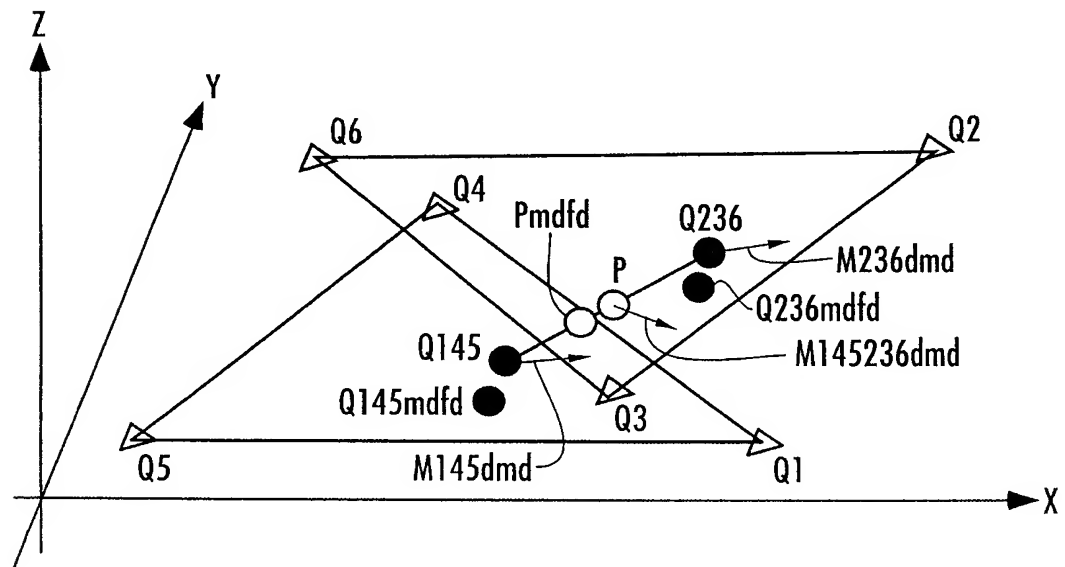


FIG.29(b)



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FIG.30

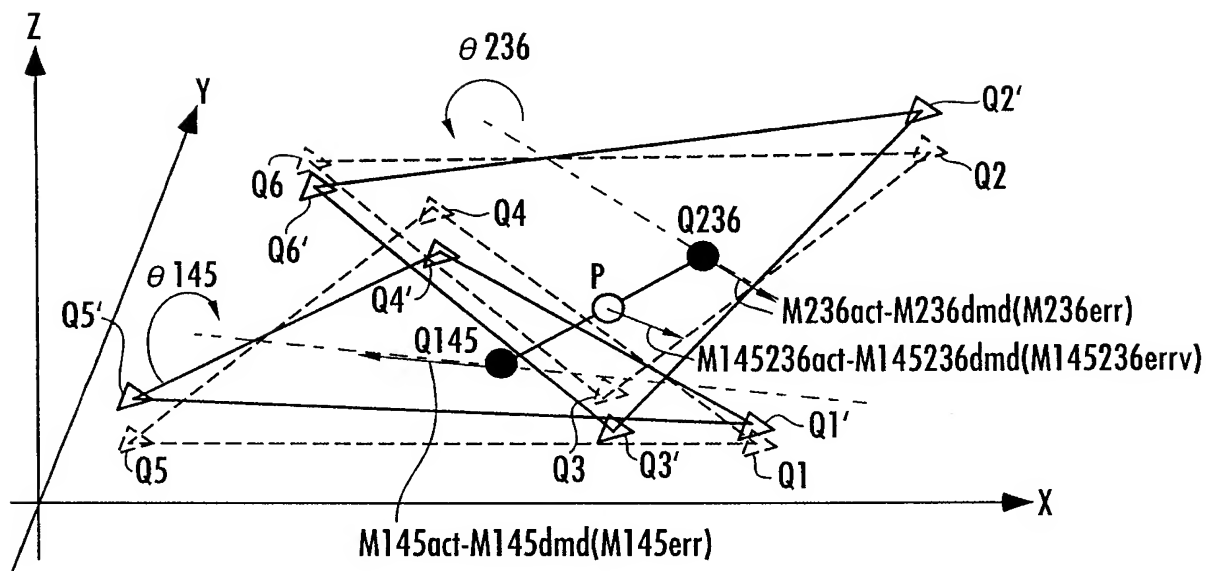


FIG.31

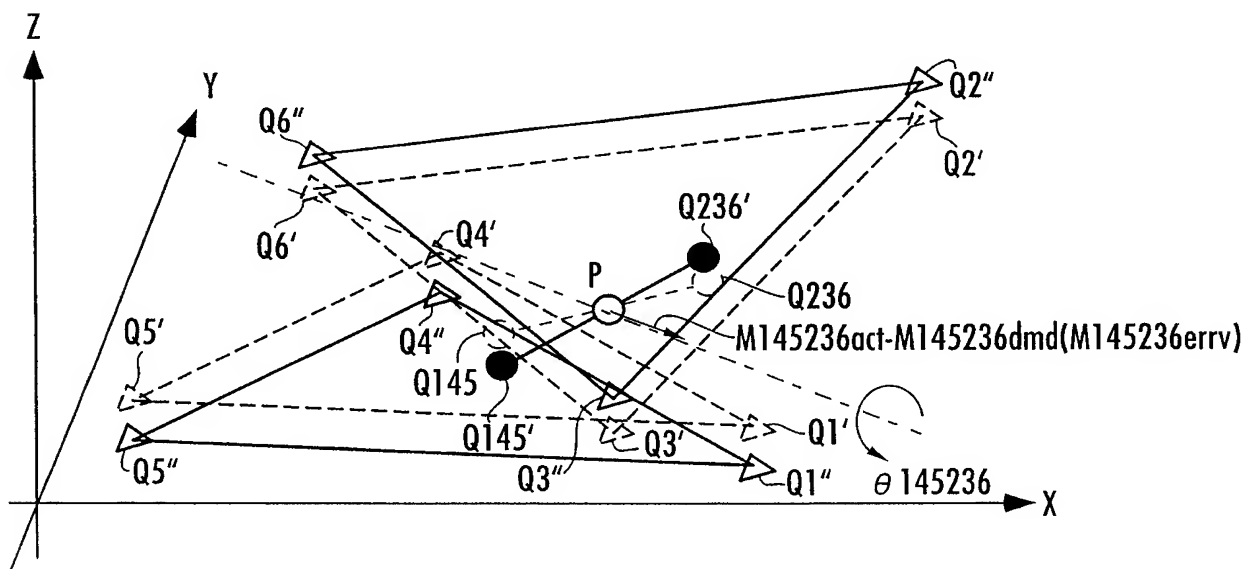
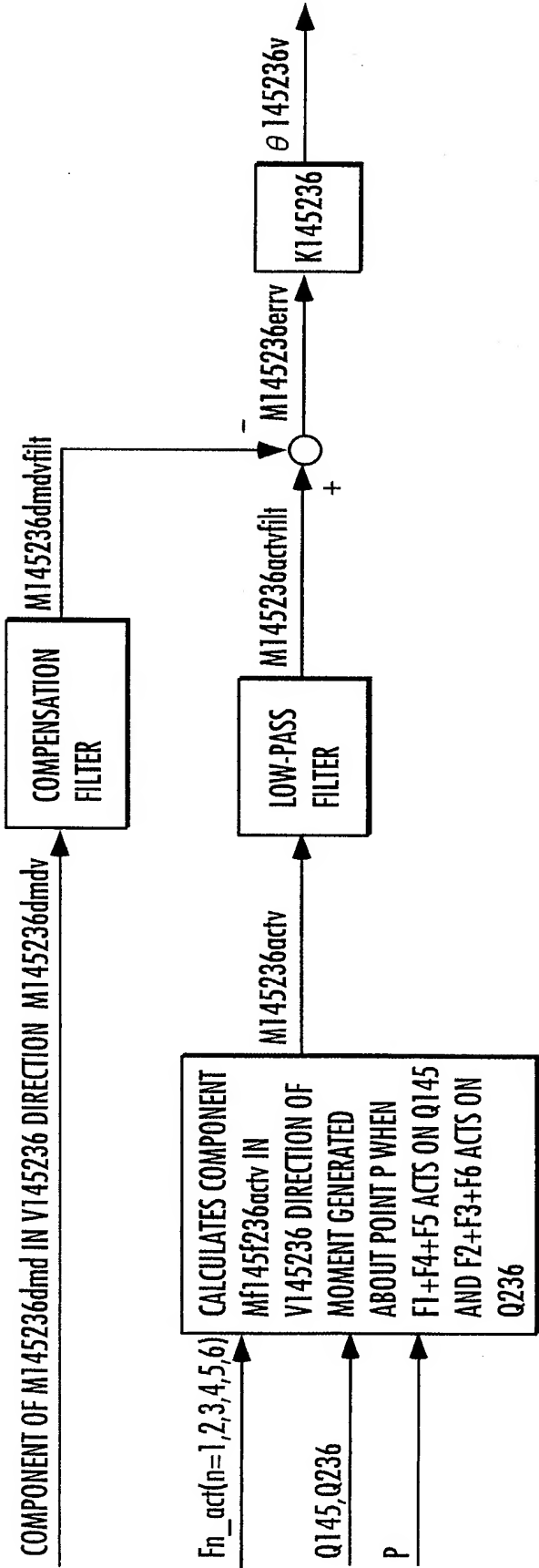
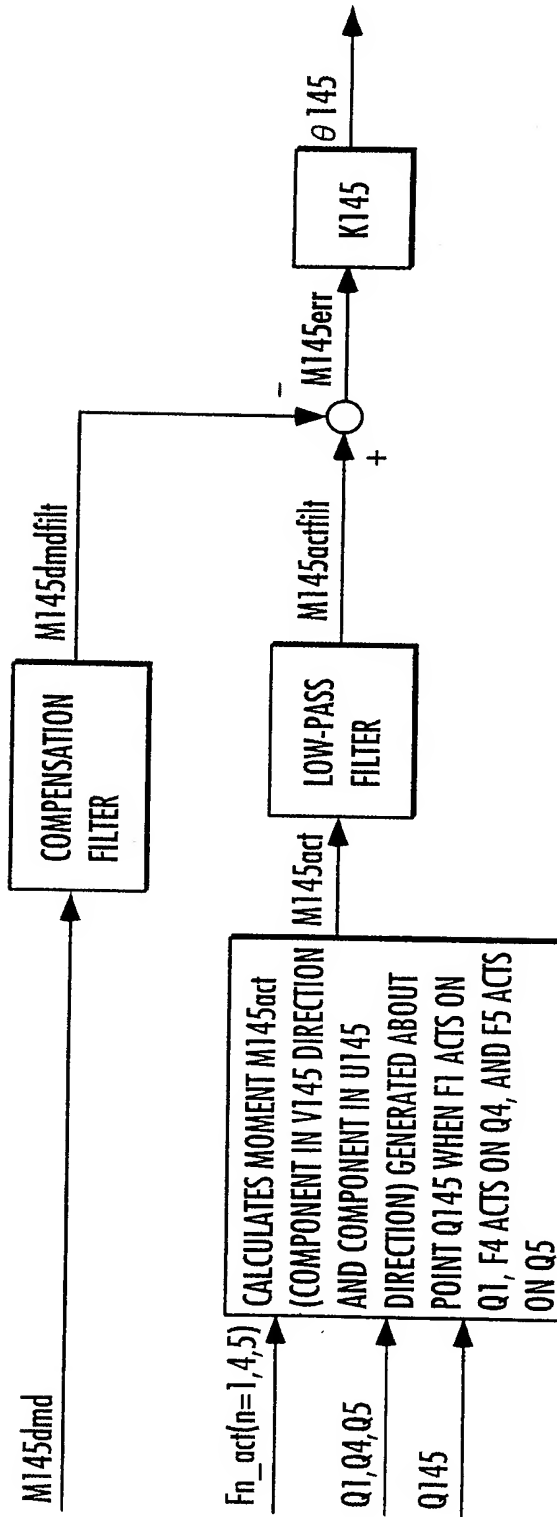


FIG.32



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FIG.33



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FIG.34

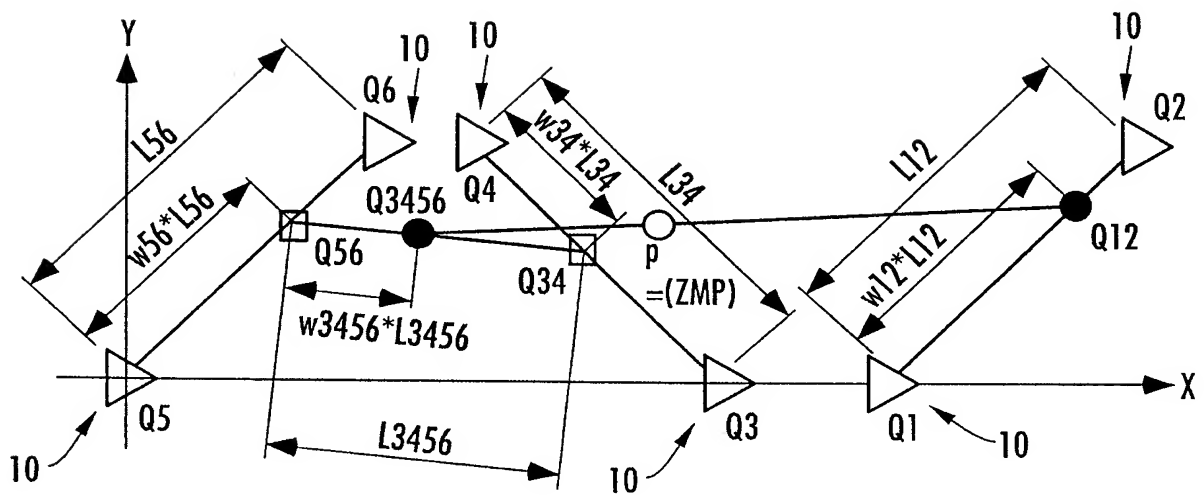
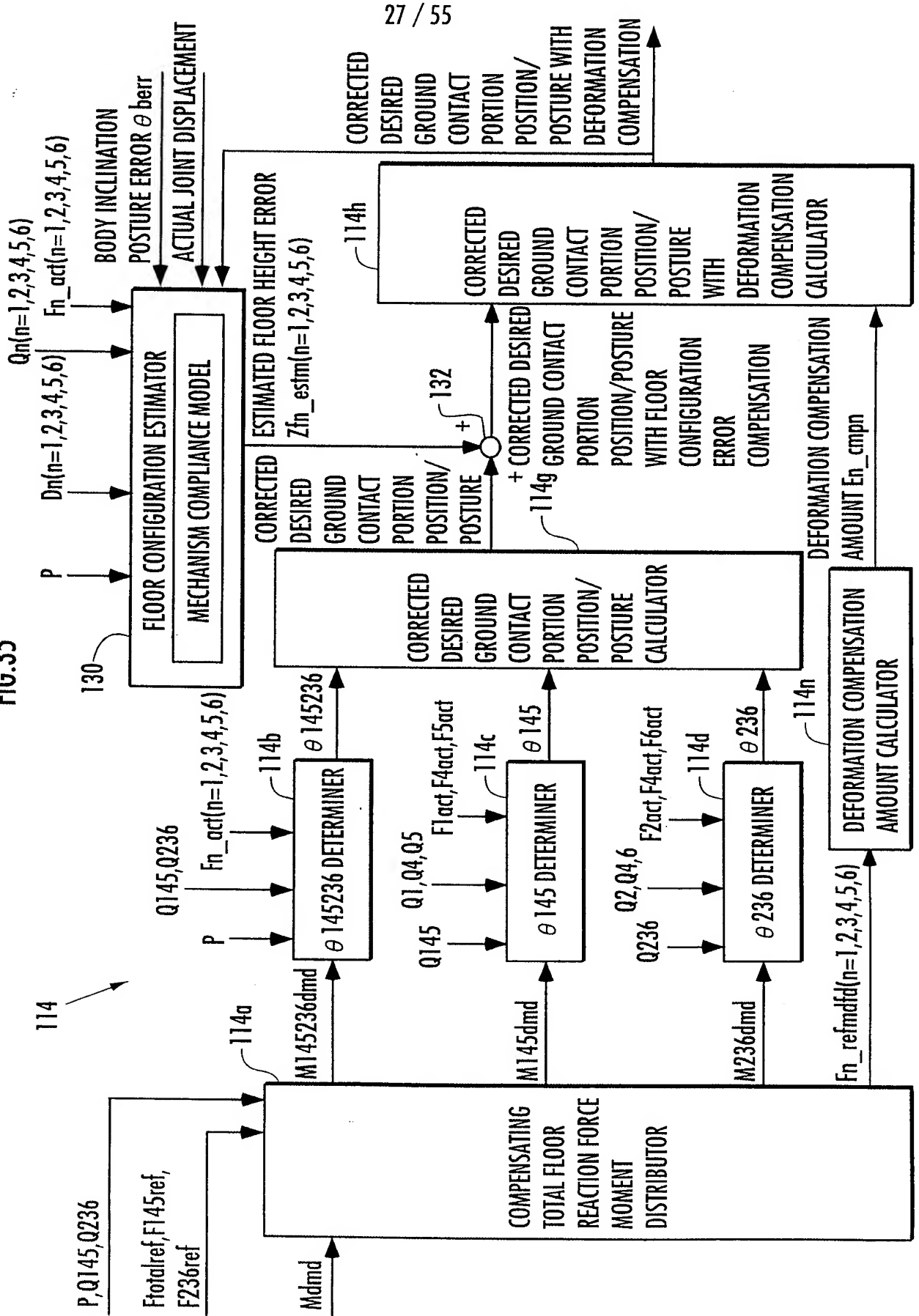
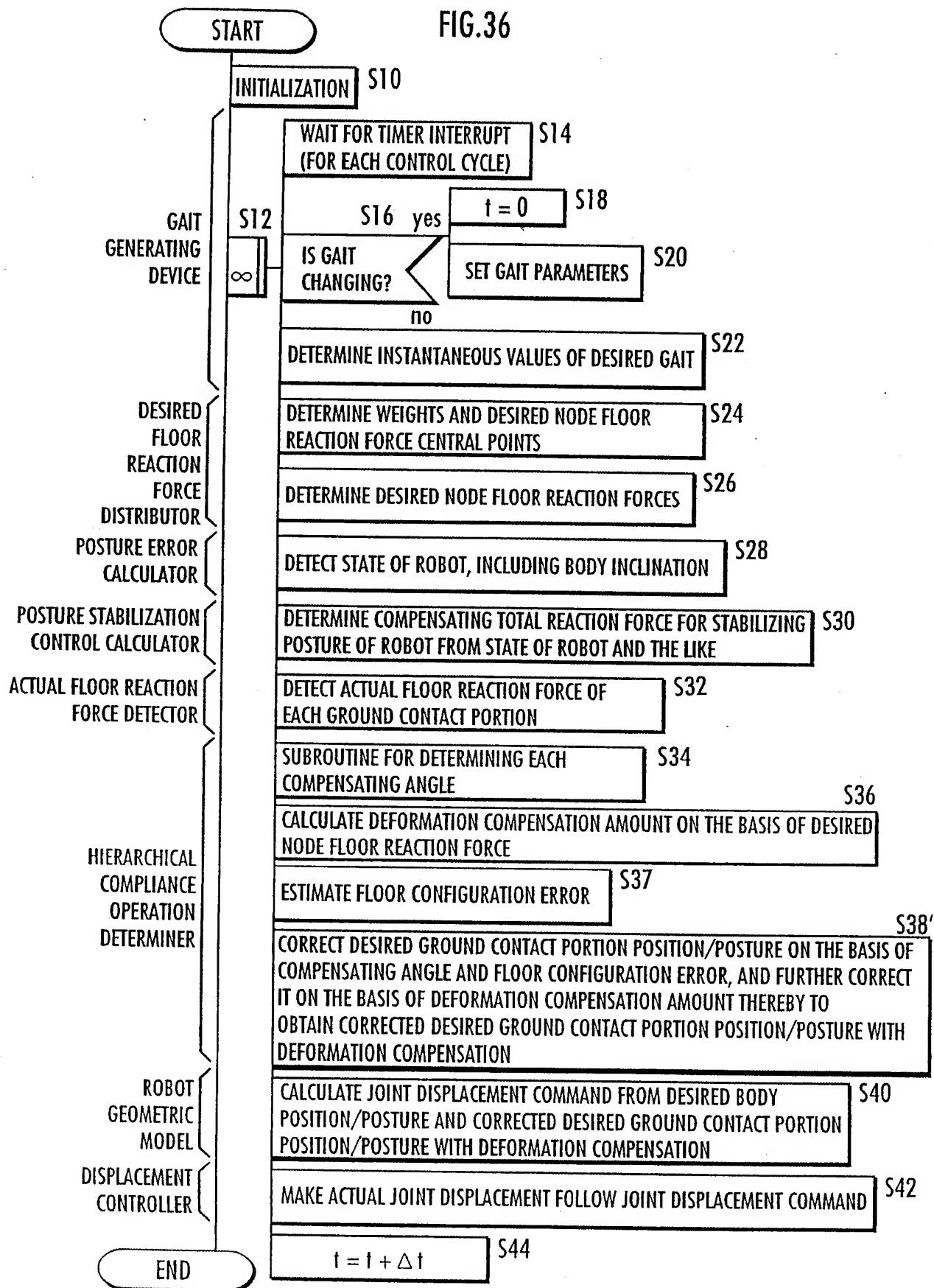


FIG.35



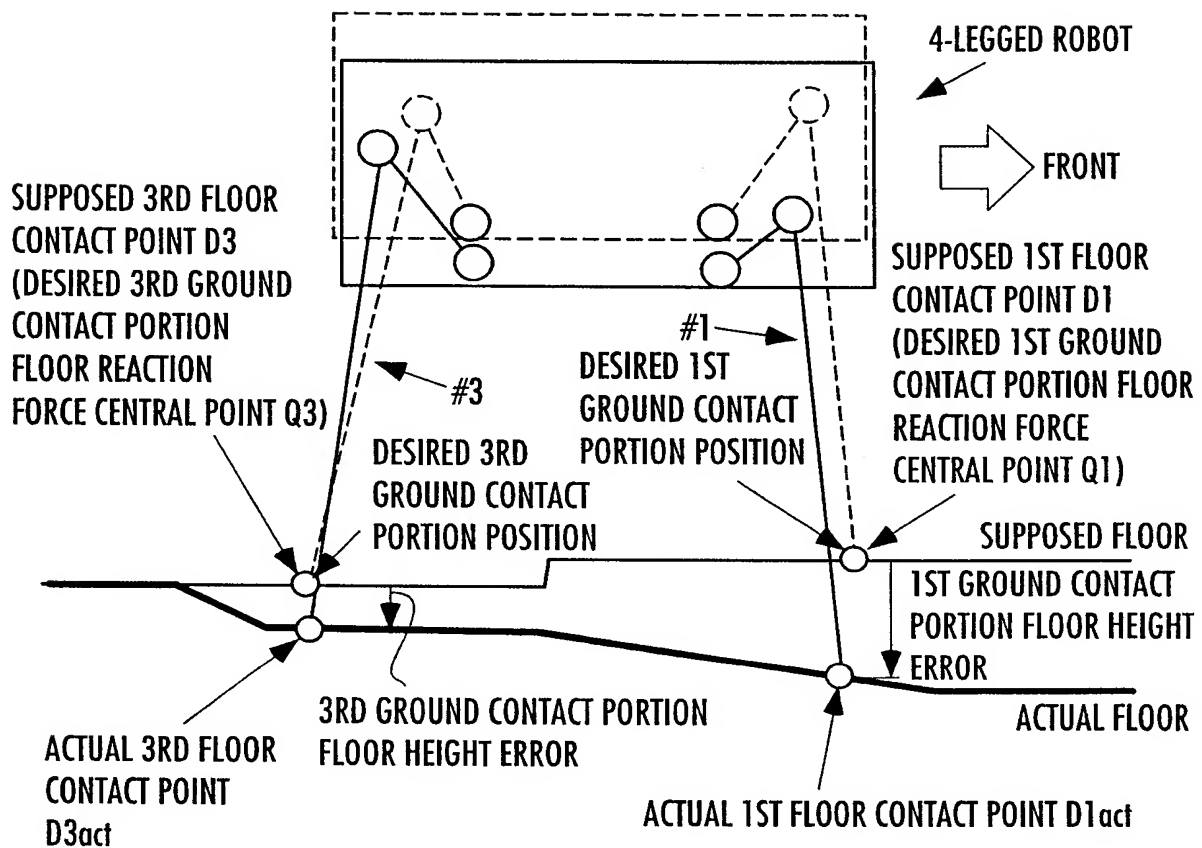
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FIG.36



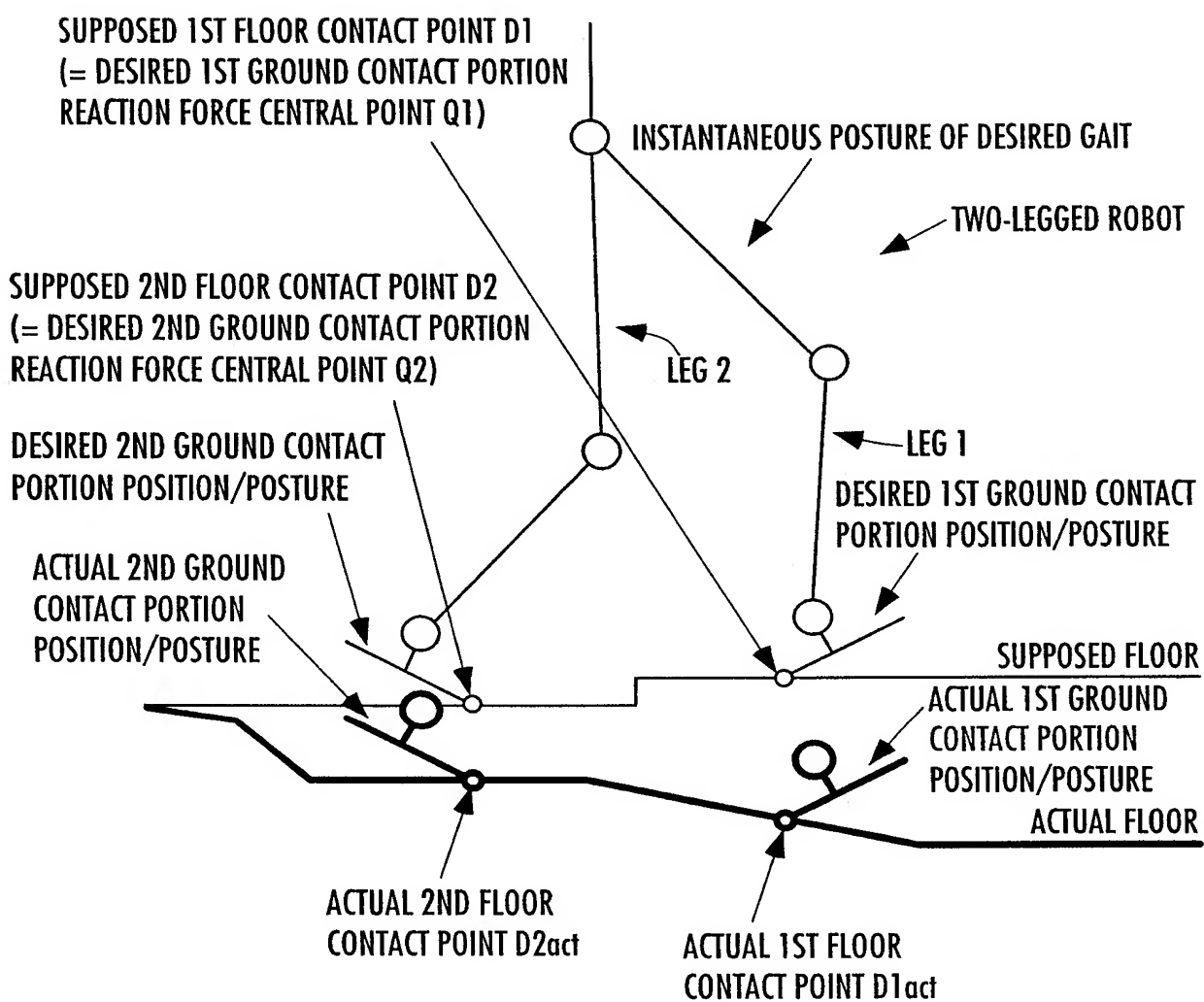
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FIG.37



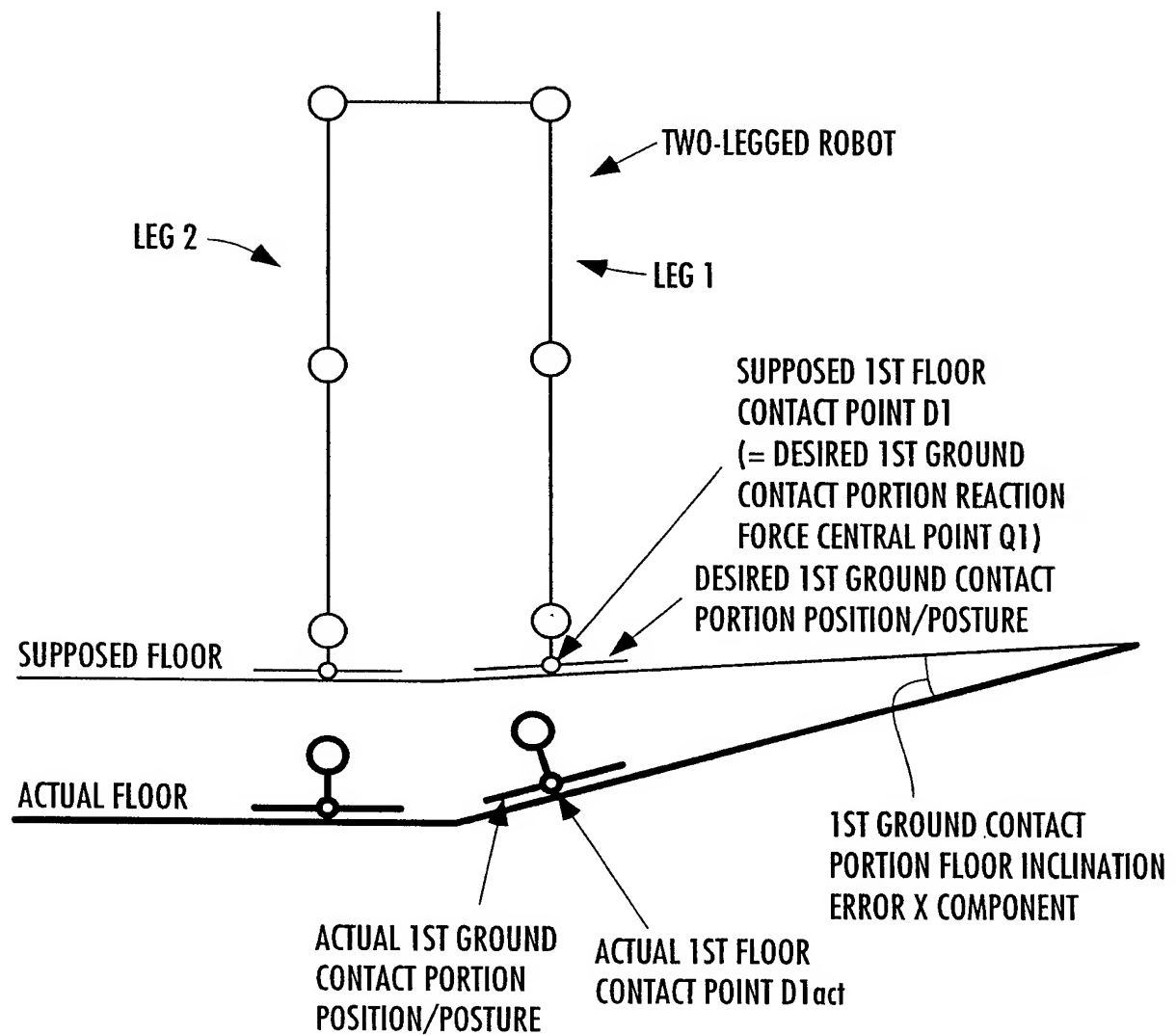
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FIG.38



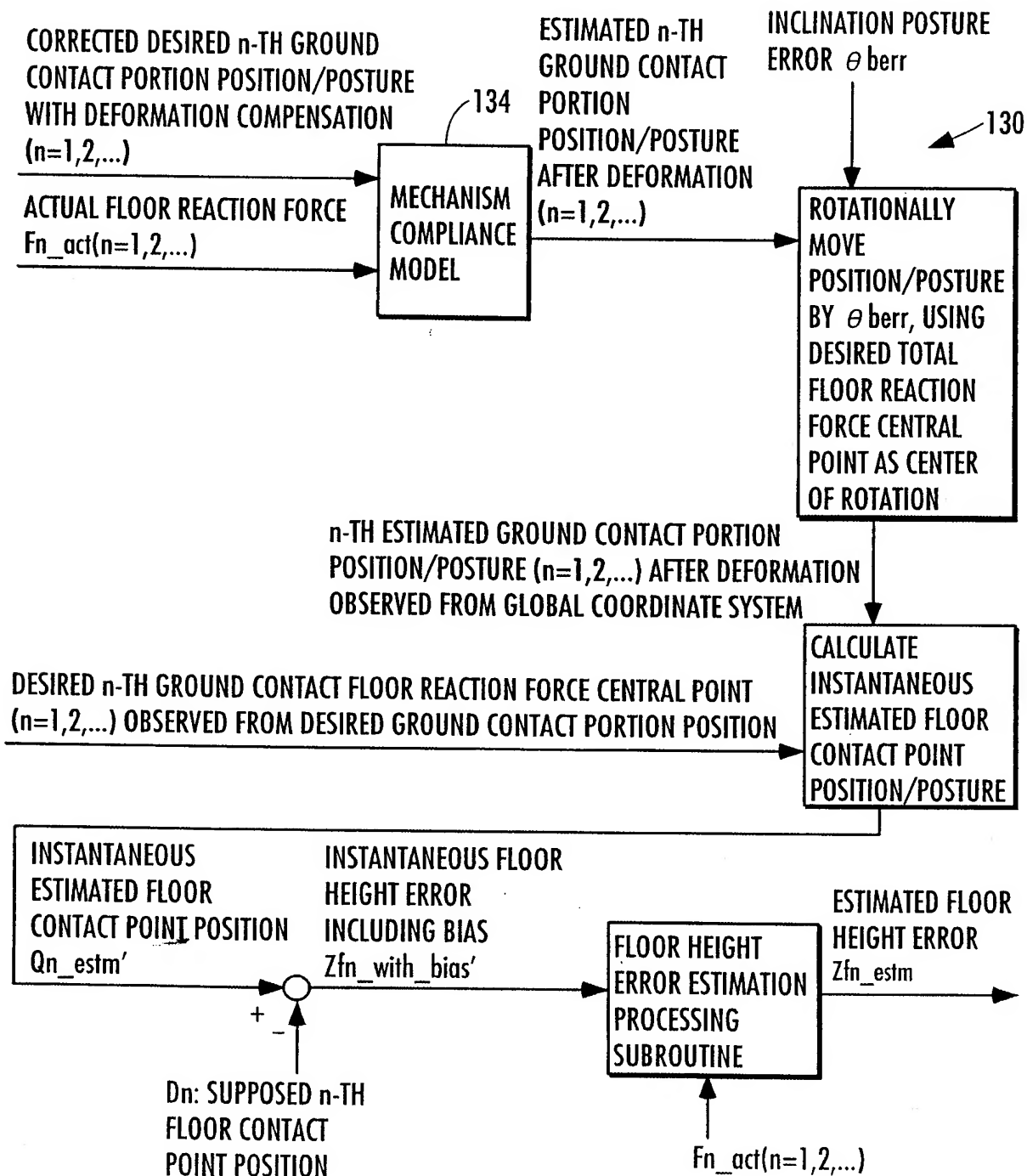
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FIG.39



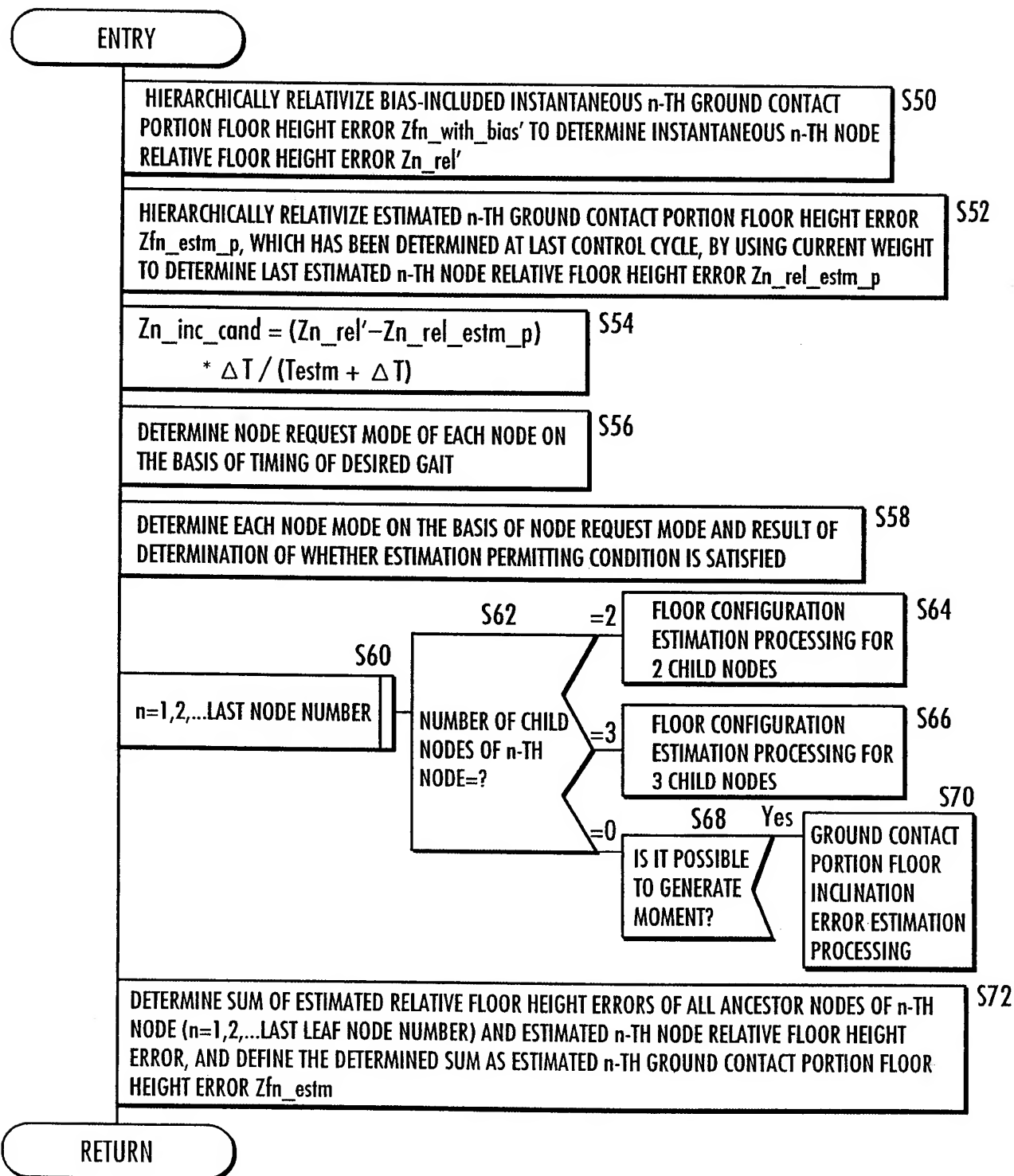
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FIG.40



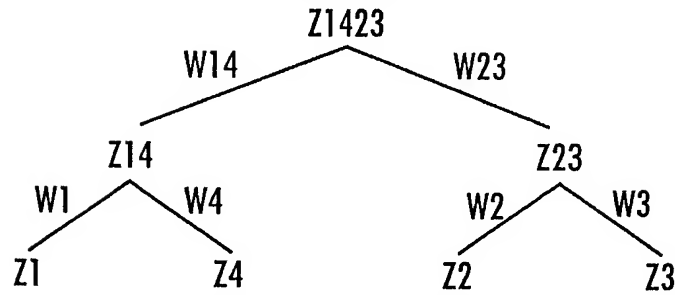
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FIG.41



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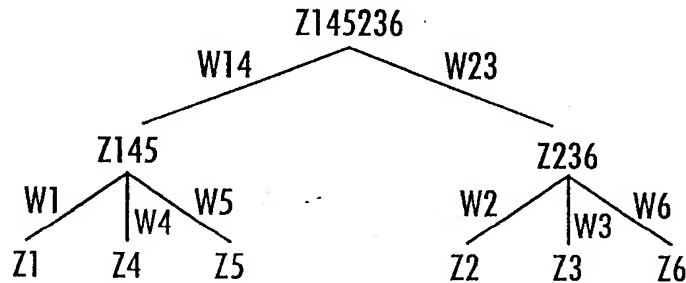
FIG.42



$$\begin{aligned} Z14_with_bias &= W1 \cdot Z1_with_bias + W4 \cdot Z4_with_bias \\ Z23_with_bias &= W2 \cdot Z2_with_bias + W3 \cdot Z3_with_bias \\ Z1423_with_bias &= W14 \cdot Z14_with_bias + W23 \cdot Z23_with_bias \end{aligned}$$

$$\begin{aligned} Z1_rel &= Z1_with_bias - Z14_with_bias \\ Z4_rel &= Z4_with_bias - Z14_with_bias \\ Z2_rel &= Z2_with_bias - Z23_with_bias \\ Z3_rel &= Z3_with_bias - Z23_with_bias \\ Z14_rel &= Z14_with_bias - Z1423_with_bias \\ Z23_rel &= Z23_with_bias - Z1423_with_bias \end{aligned}$$

FIG.43

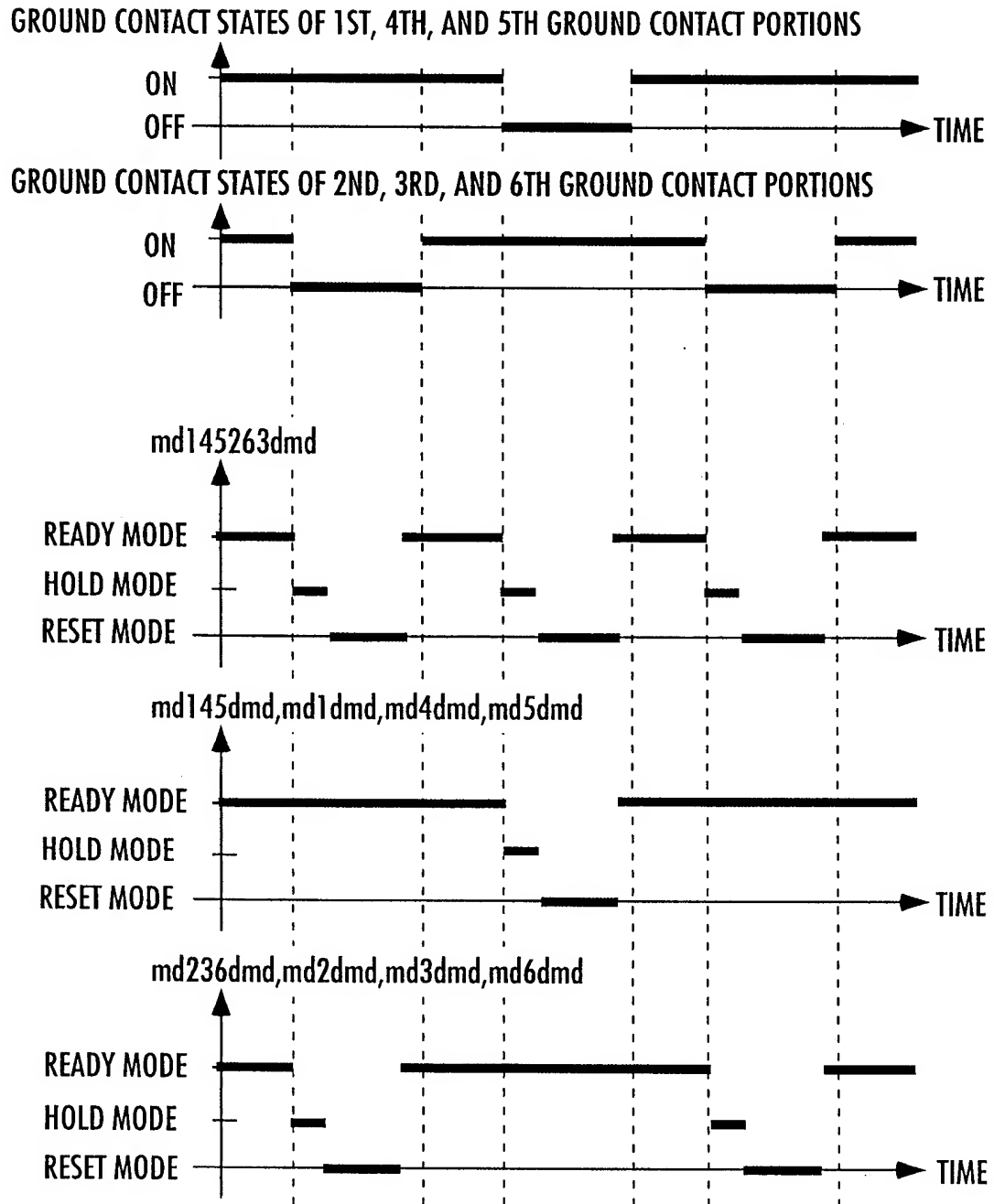


$$\begin{aligned} Z145_with_bias &= W1 \cdot Z1_with_bias + W4 \cdot Z4_with_bias + W5 \cdot Z5_with_bias \\ Z236_with_bias &= W2 \cdot Z2_with_bias + W3 \cdot Z3_with_bias + W6 \cdot Z6_with_bias \\ Z145236_with_bias &= W145 \cdot Z145_with_bias + W236 \cdot Z236_with_bias \end{aligned}$$

$$\begin{aligned} Z1_rel &= Z1_with_bias - Z145_with_bias \\ Z4_rel &= Z4_with_bias - Z145_with_bias \\ Z5_rel &= Z5_with_bias - Z145_with_bias \\ Z2_rel &= Z2_with_bias - Z236_with_bias \\ Z3_rel &= Z3_with_bias - Z236_with_bias \\ Z6_rel &= Z6_with_bias - Z236_with_bias \\ Z145_rel &= Z145_with_bias - Z145236_with_bias \\ Z236_rel &= Z236_with_bias - Z145236_with_bias \end{aligned}$$

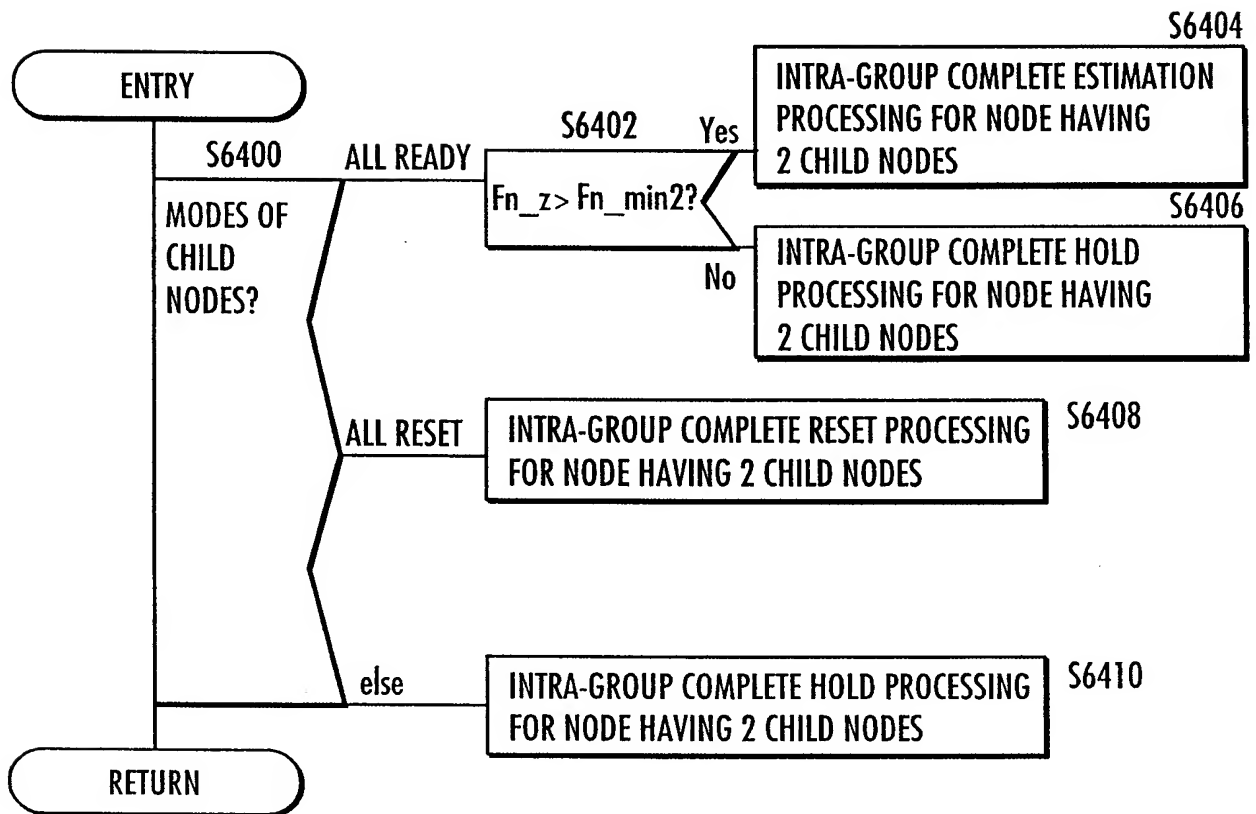
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FIG.44



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FIG.45



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FIG.46

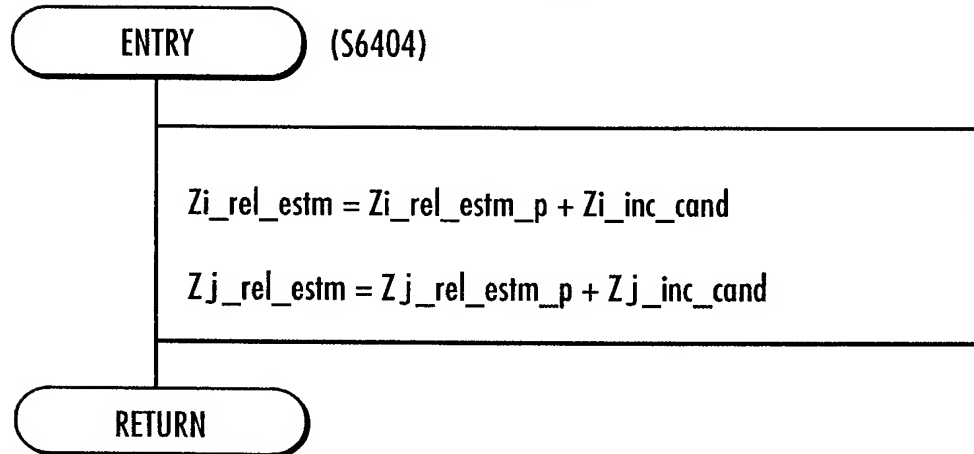


FIG.47

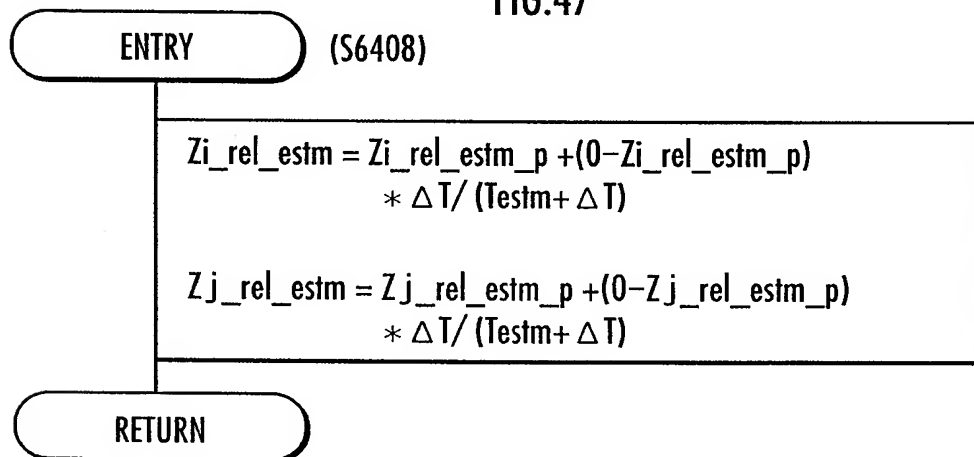
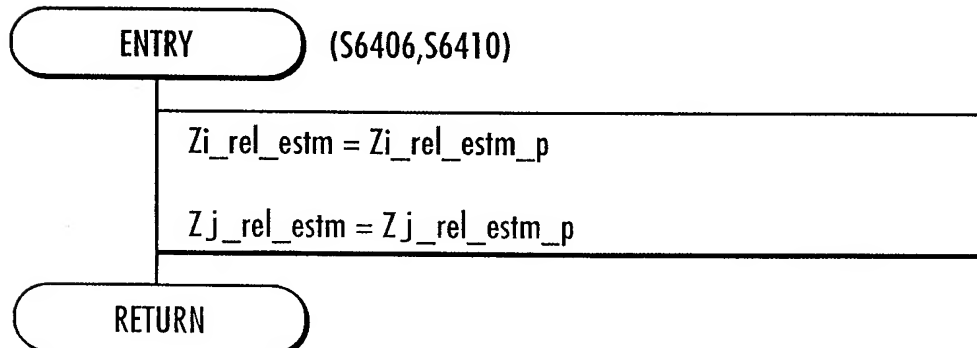
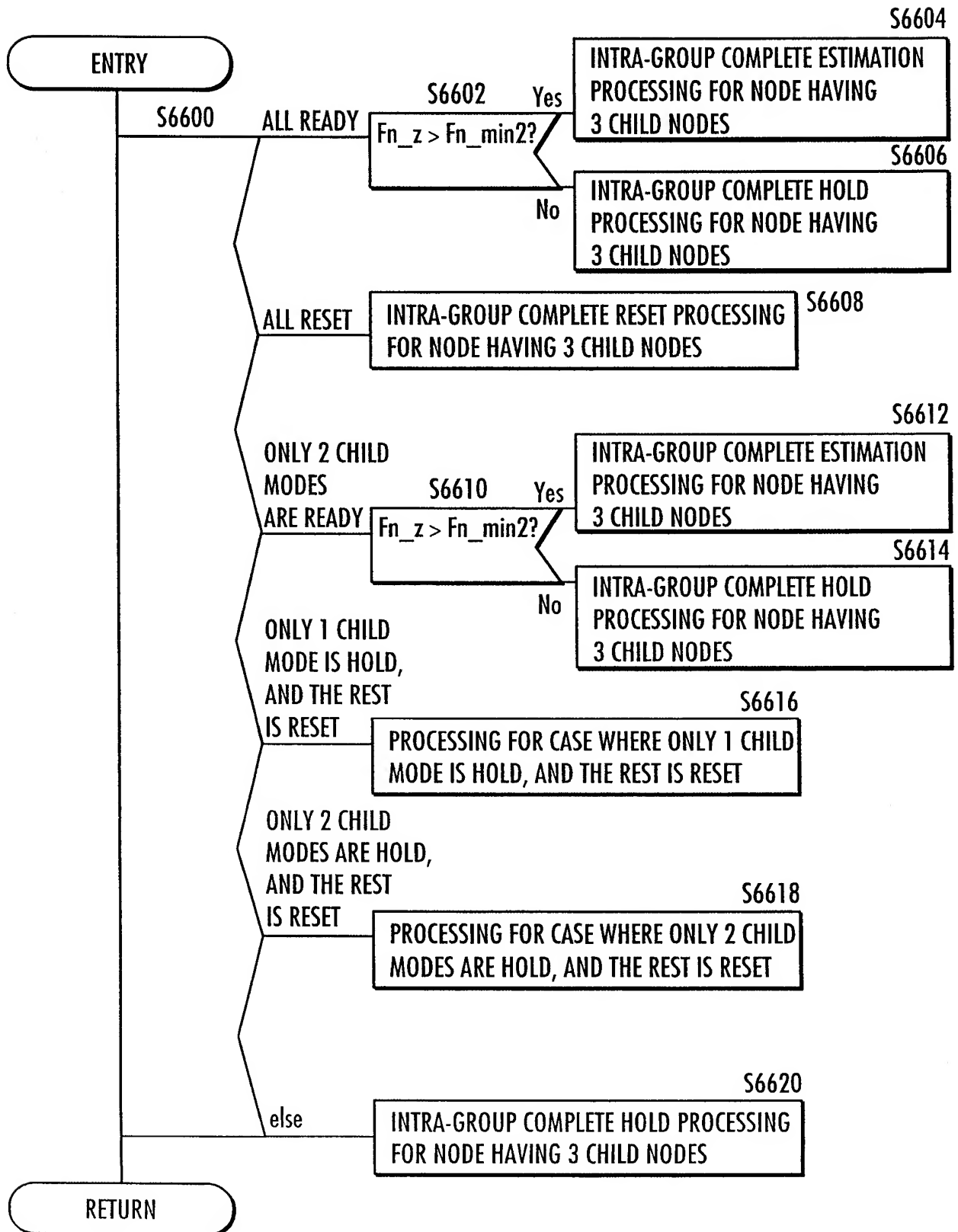


FIG.48



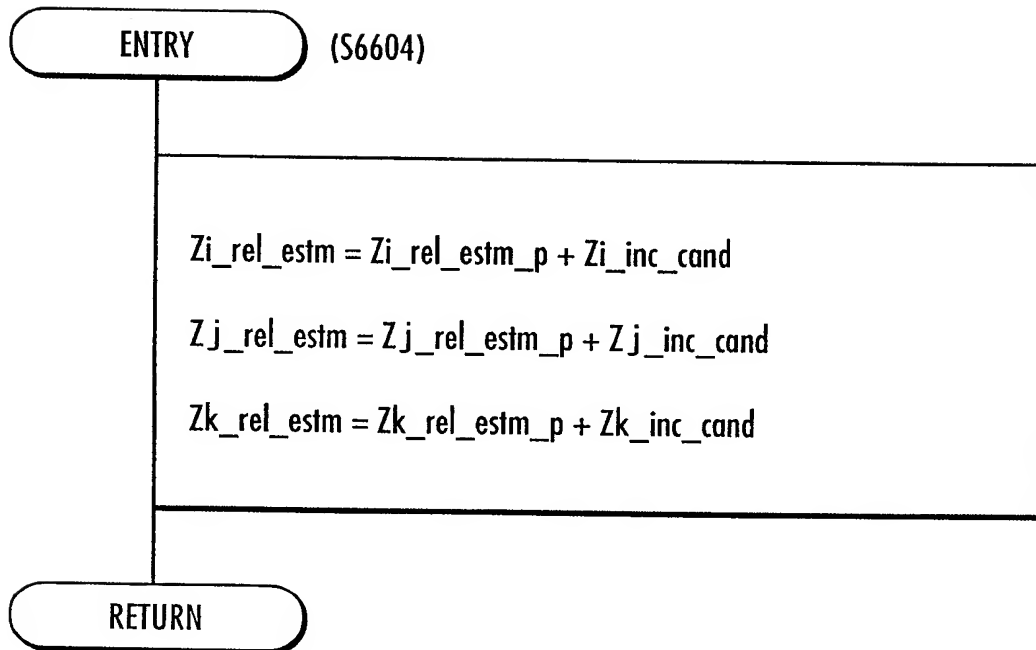
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FIG.49



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FIG.50



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FIG.51

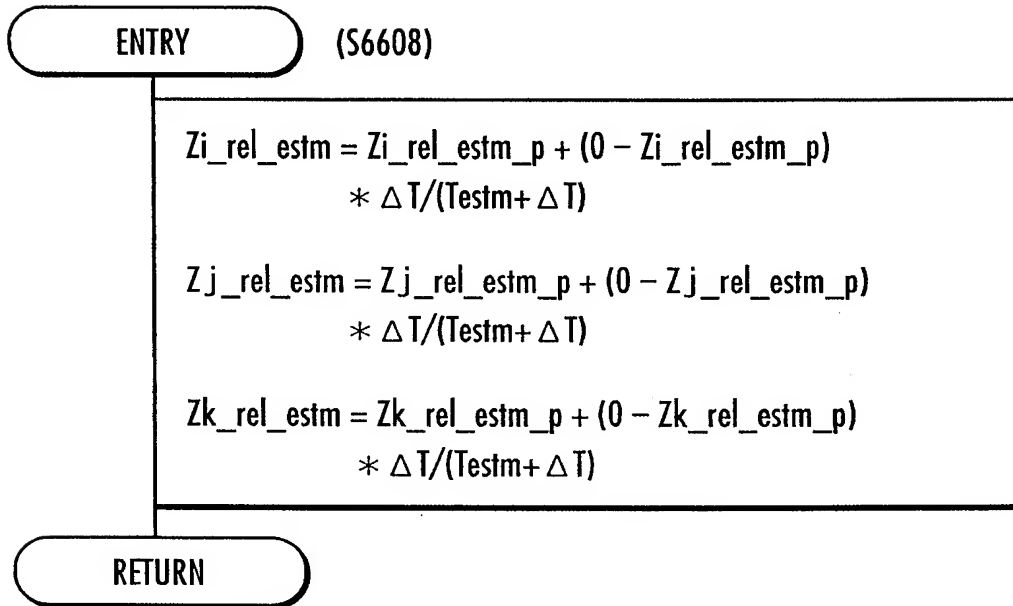
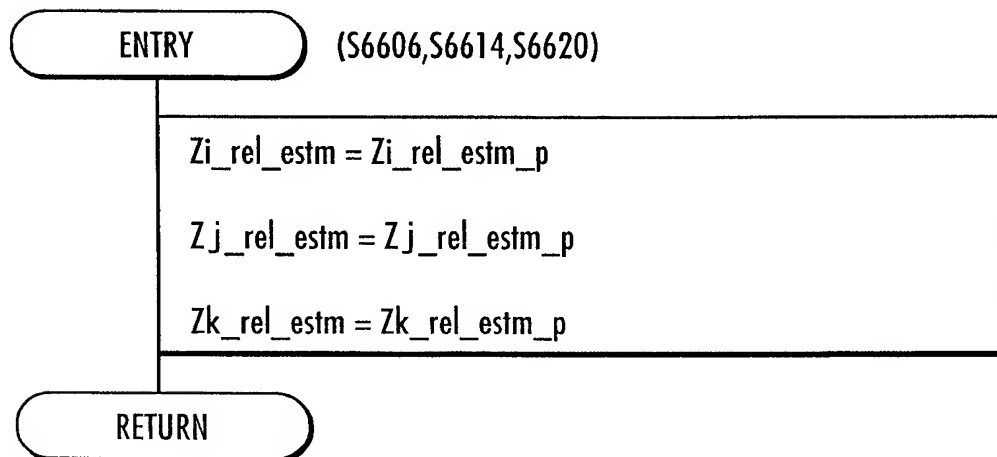
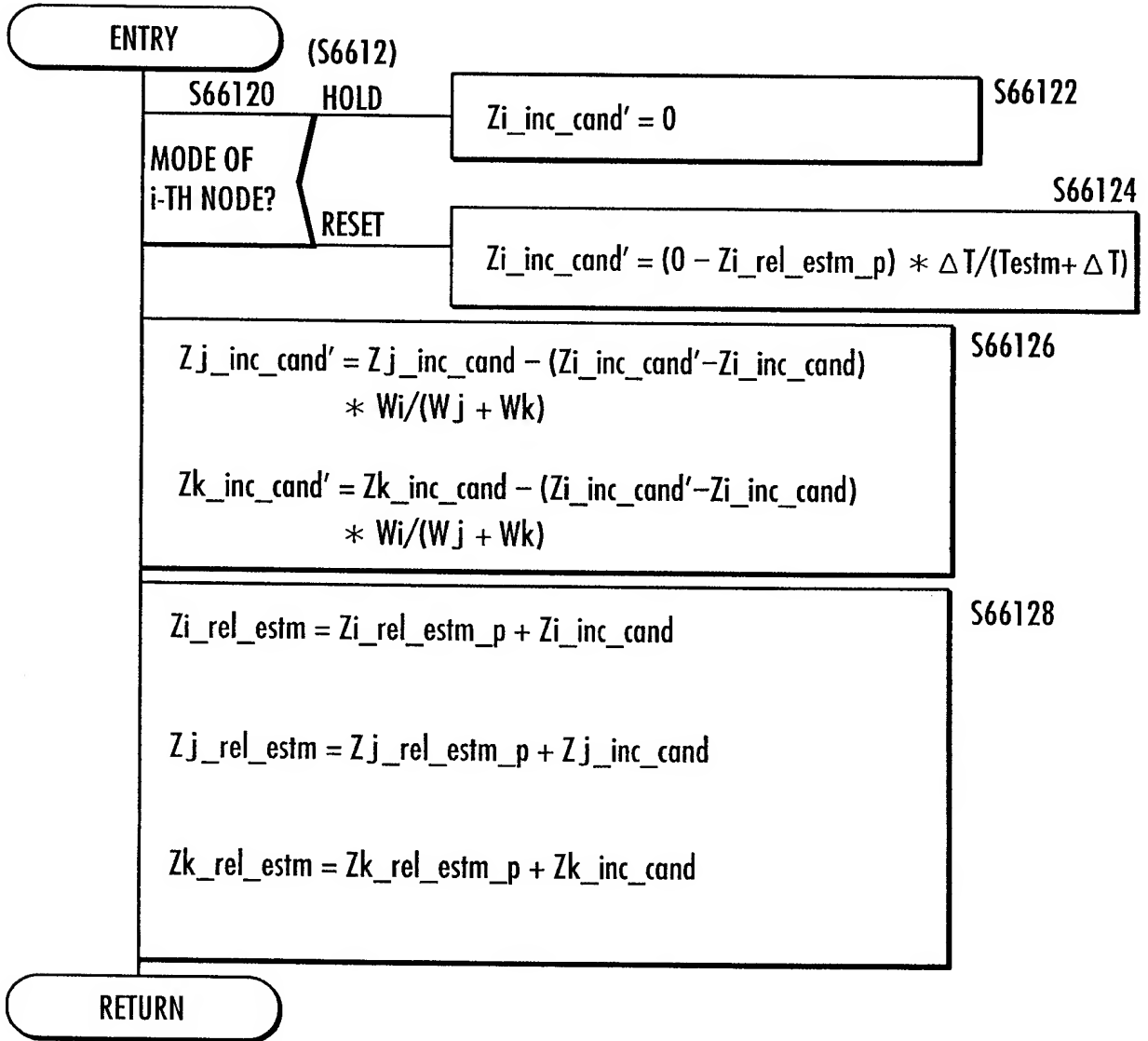


FIG.52



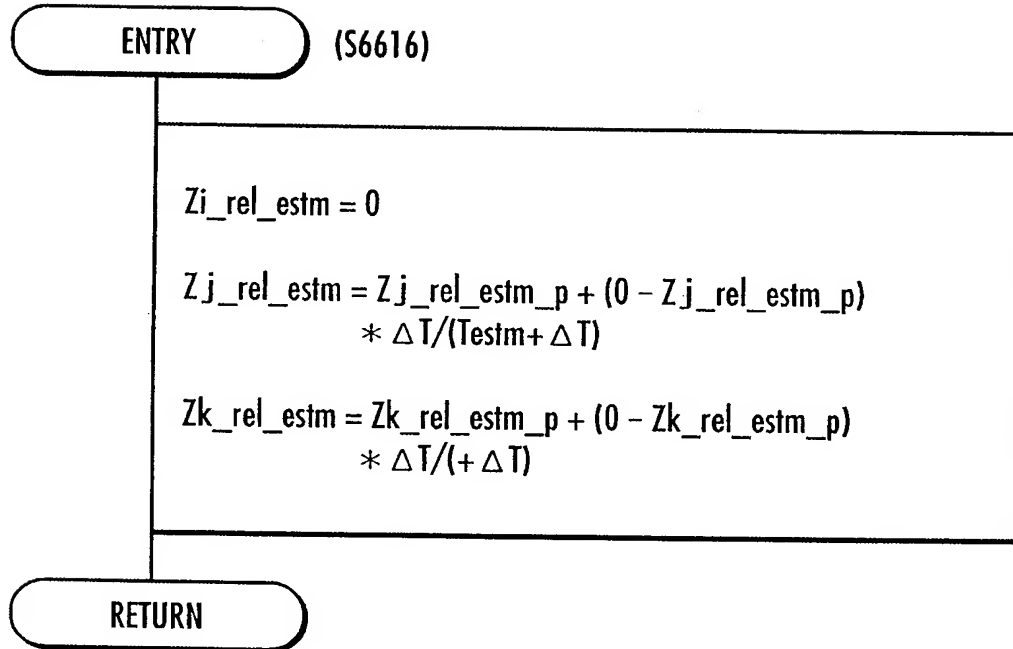
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FIG.53



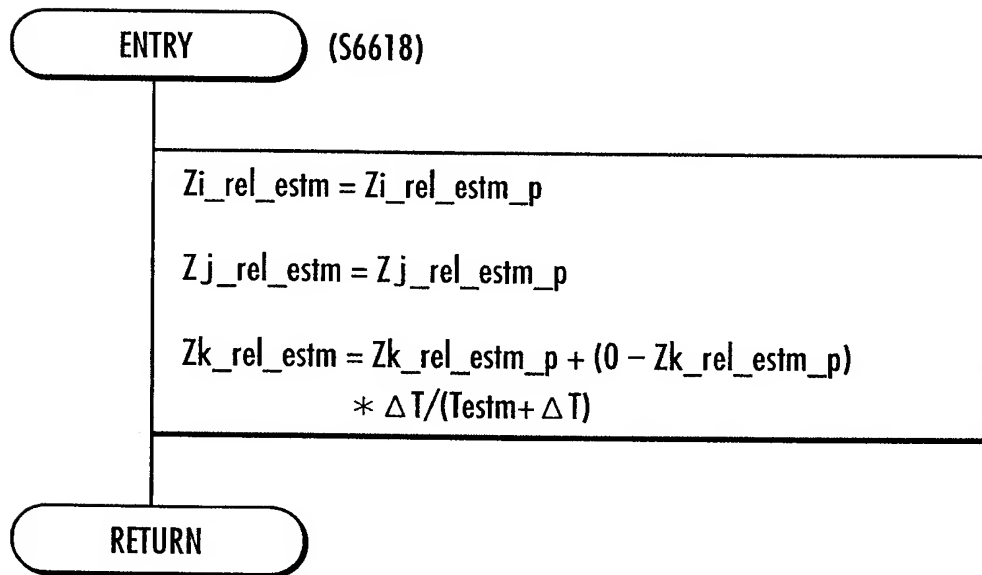
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FIG.54



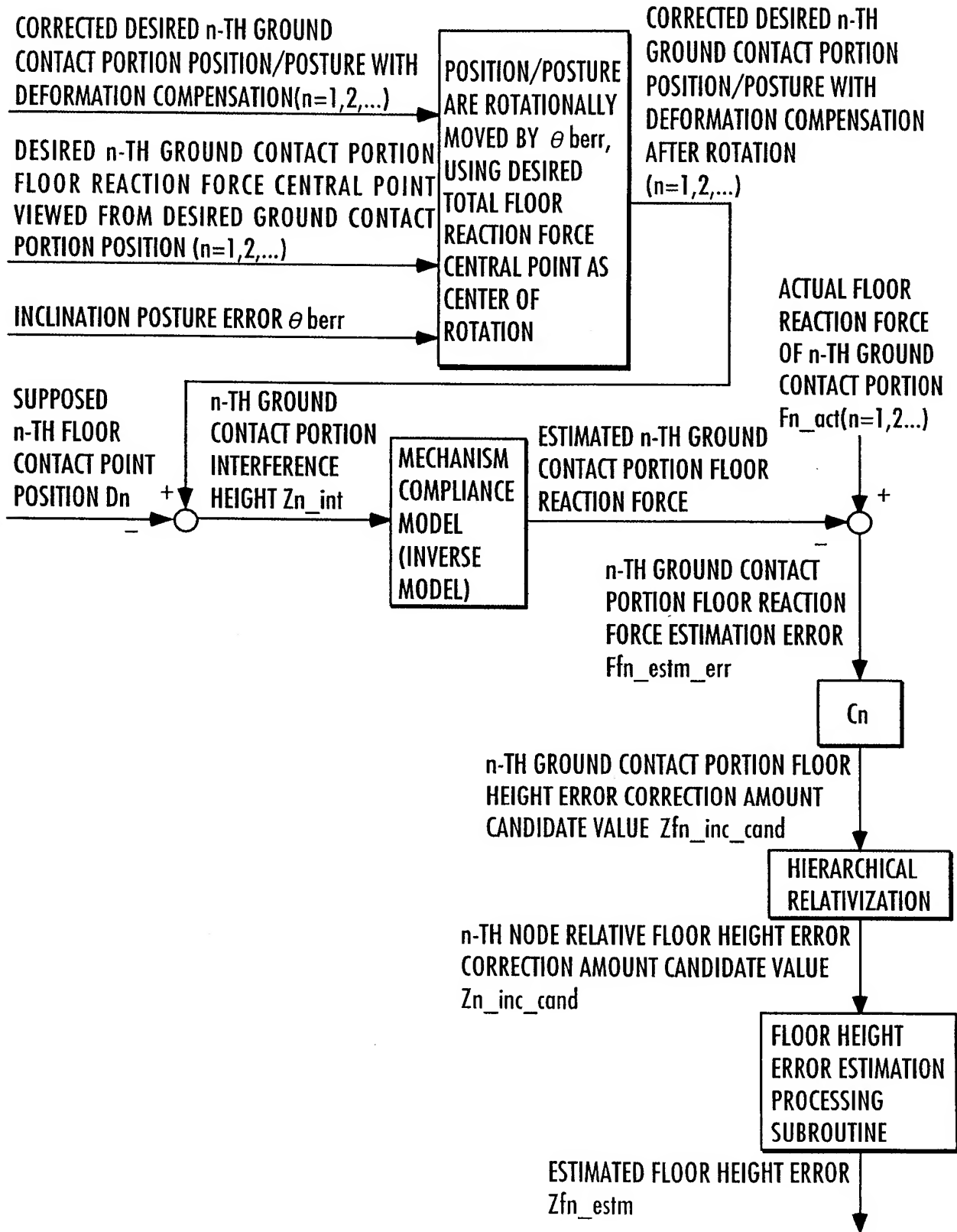
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FIG.55



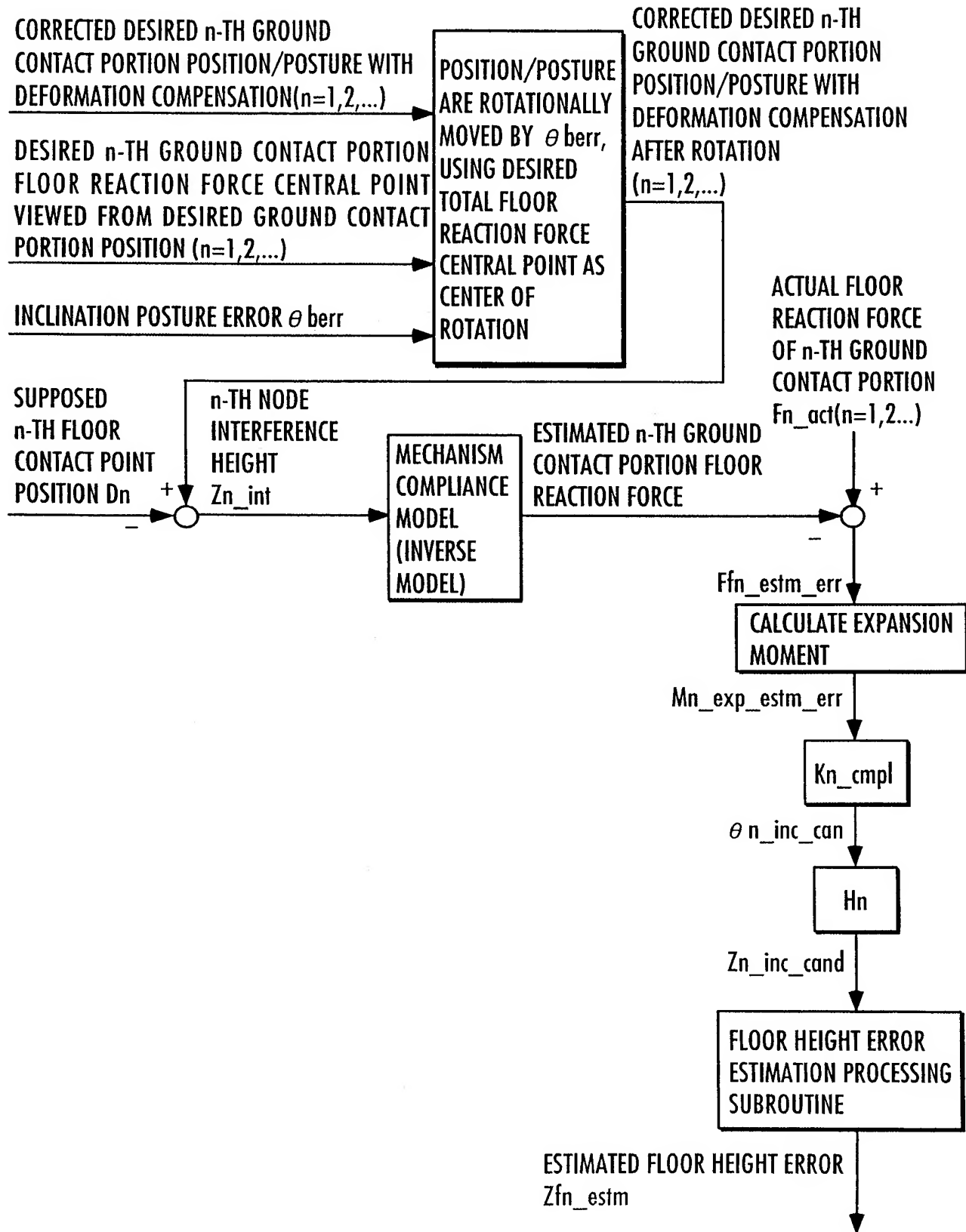
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FIG.56



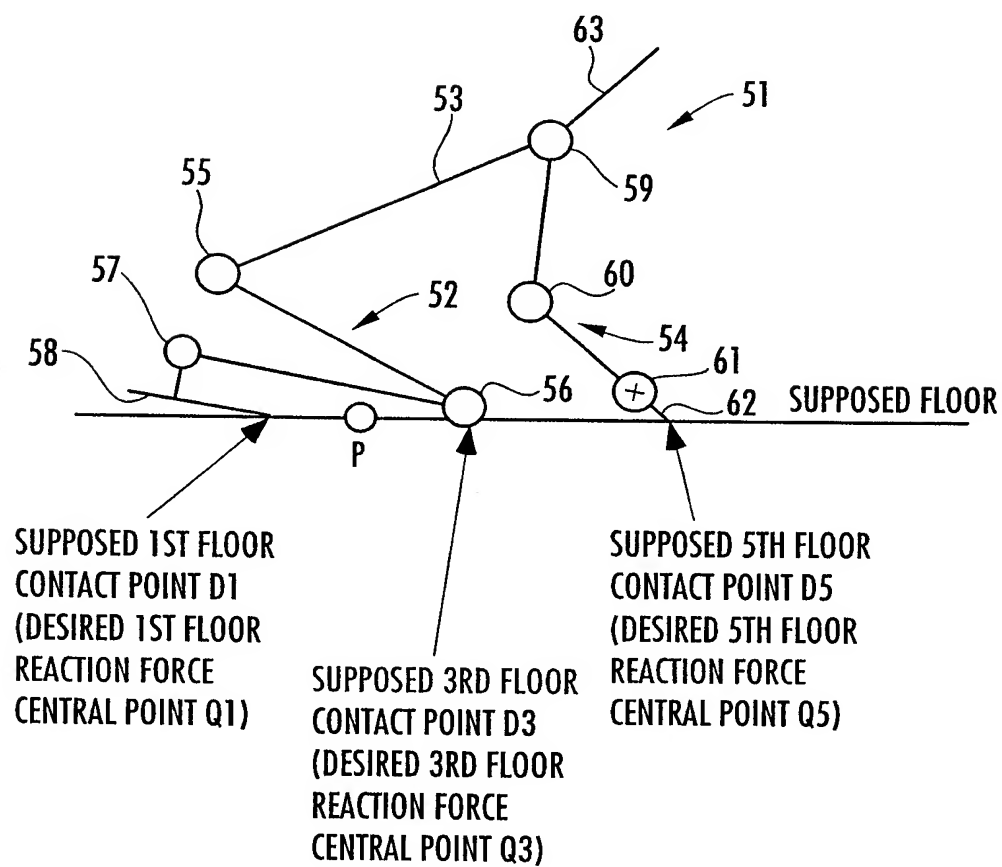
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FIG.57



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FIG.58



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FIG.59

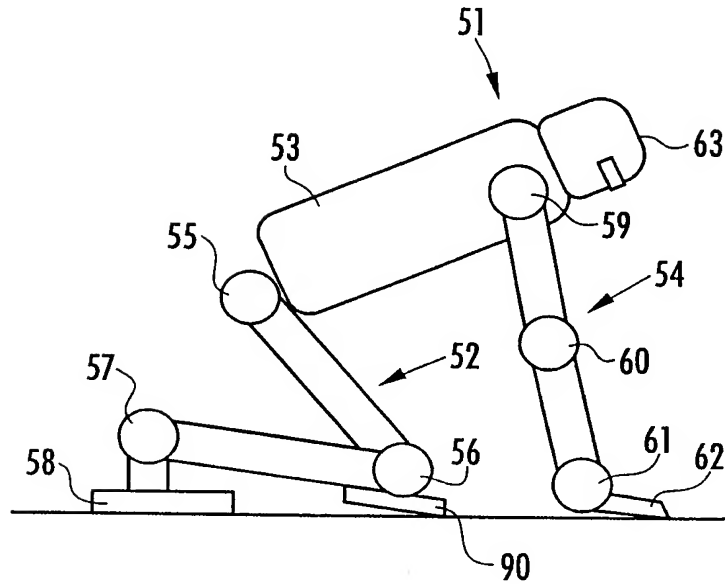
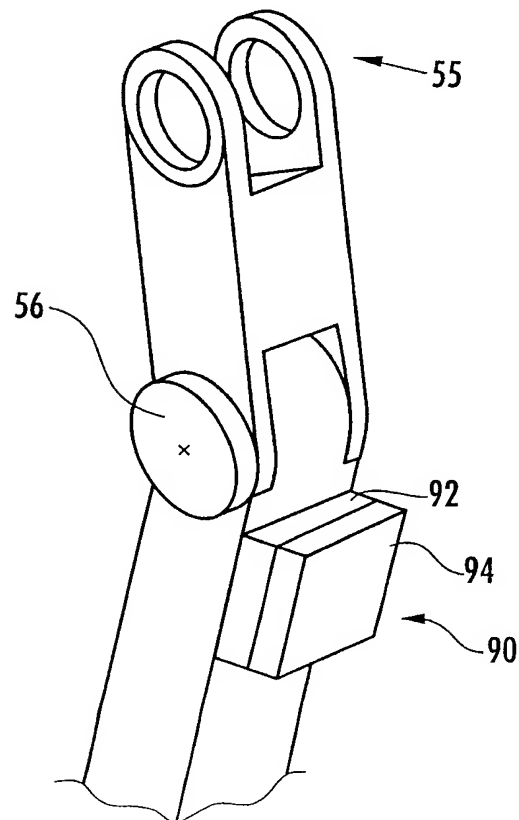
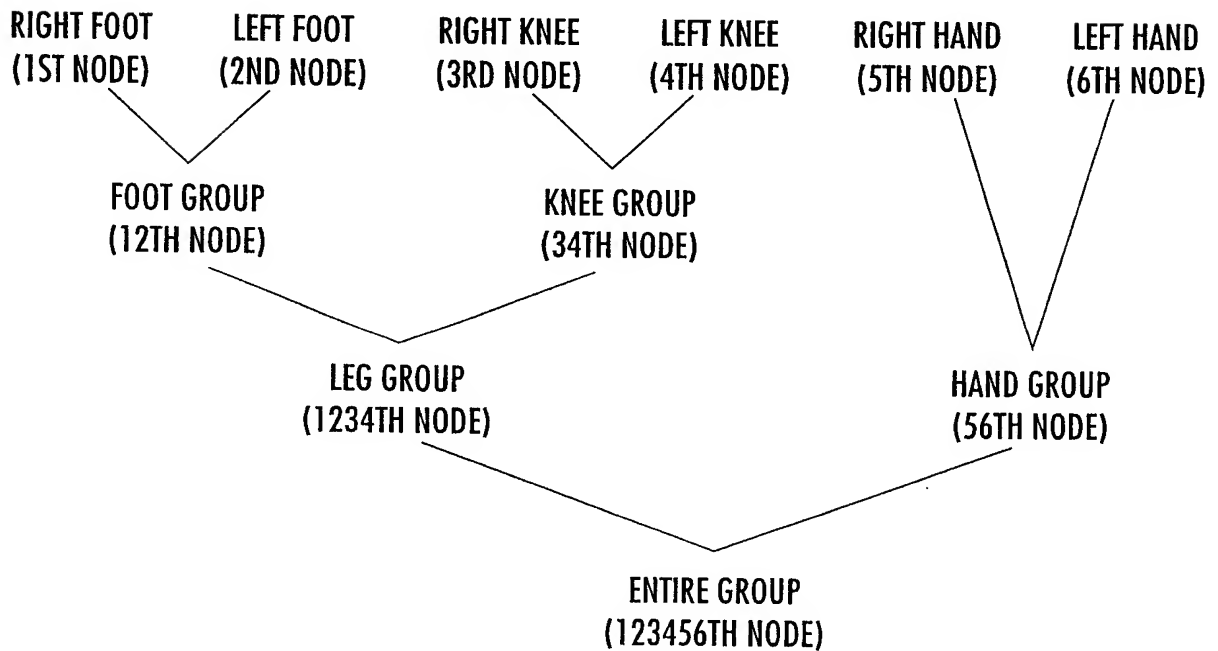
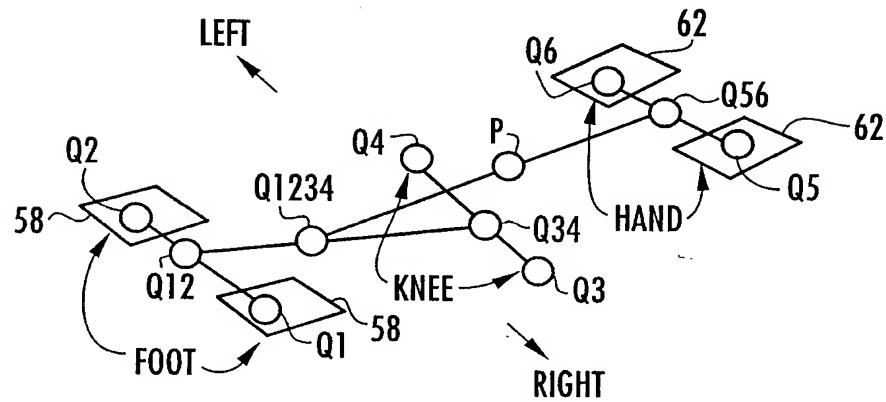


FIG.60



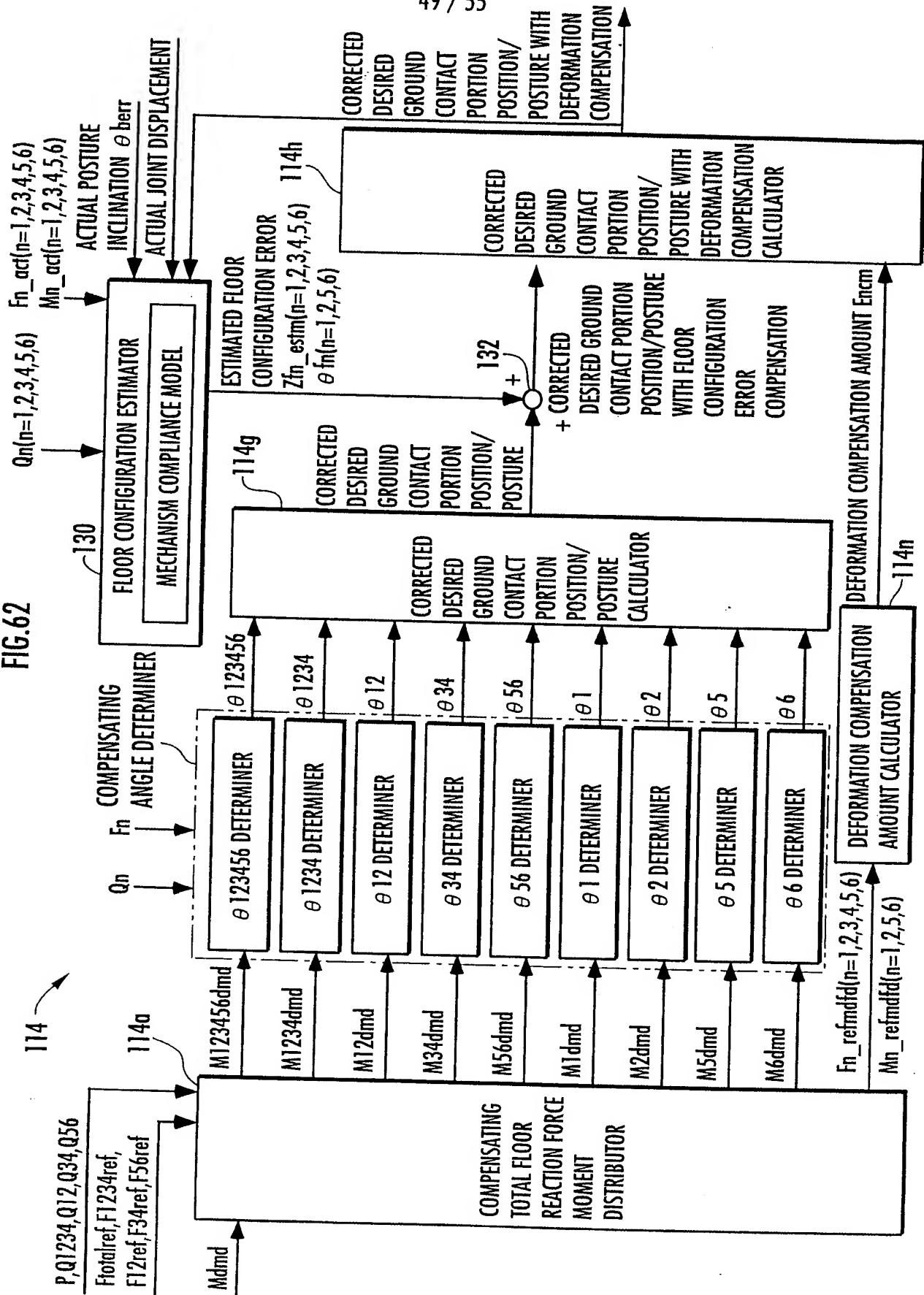
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FIG.61



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FIG. 62



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FIG.63(a)

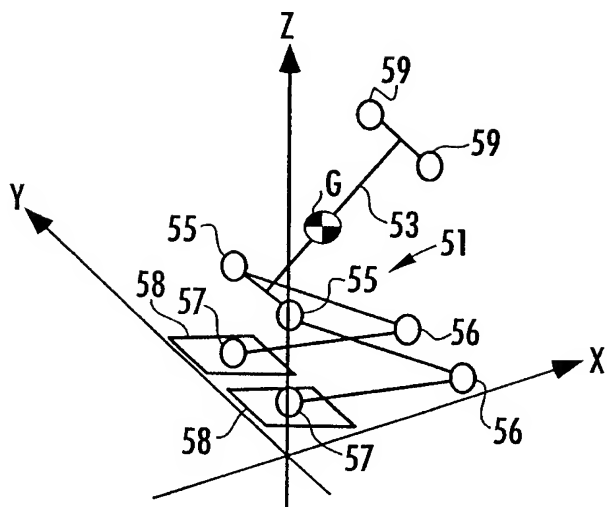


FIG.63(b)

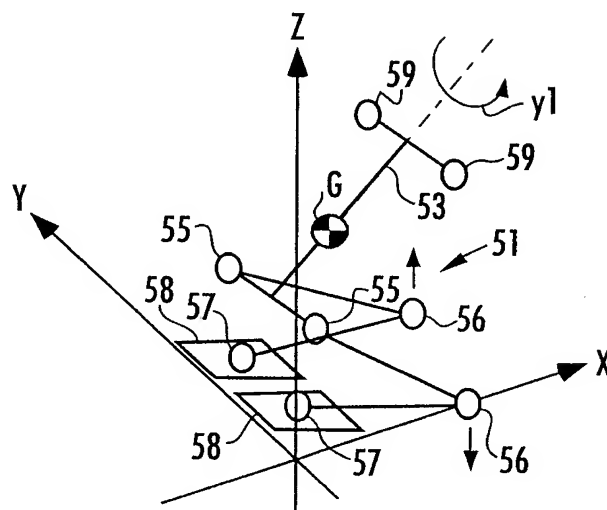
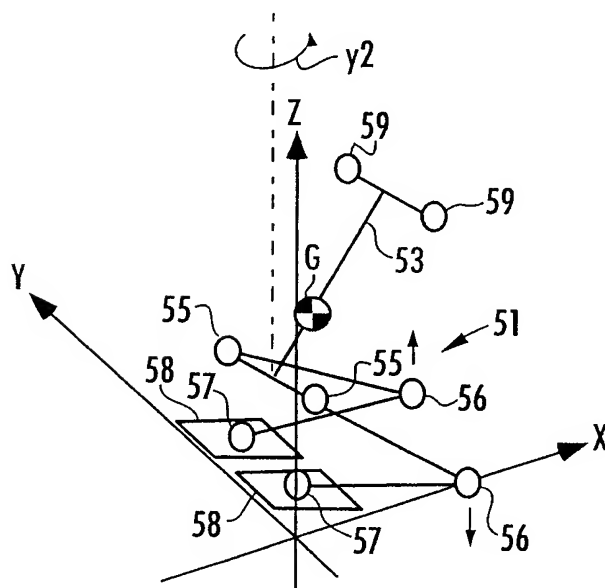
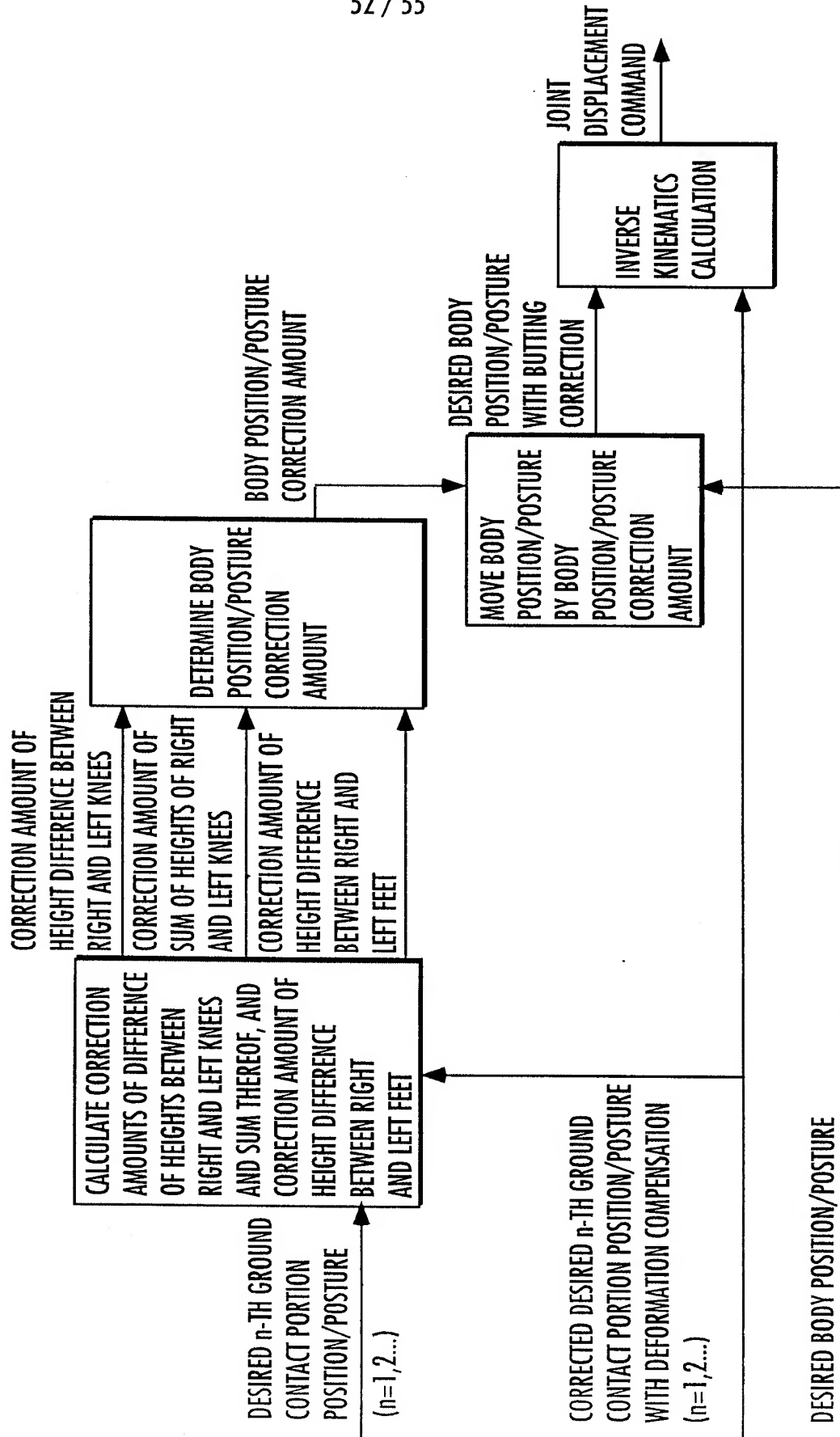


FIG.63(c)



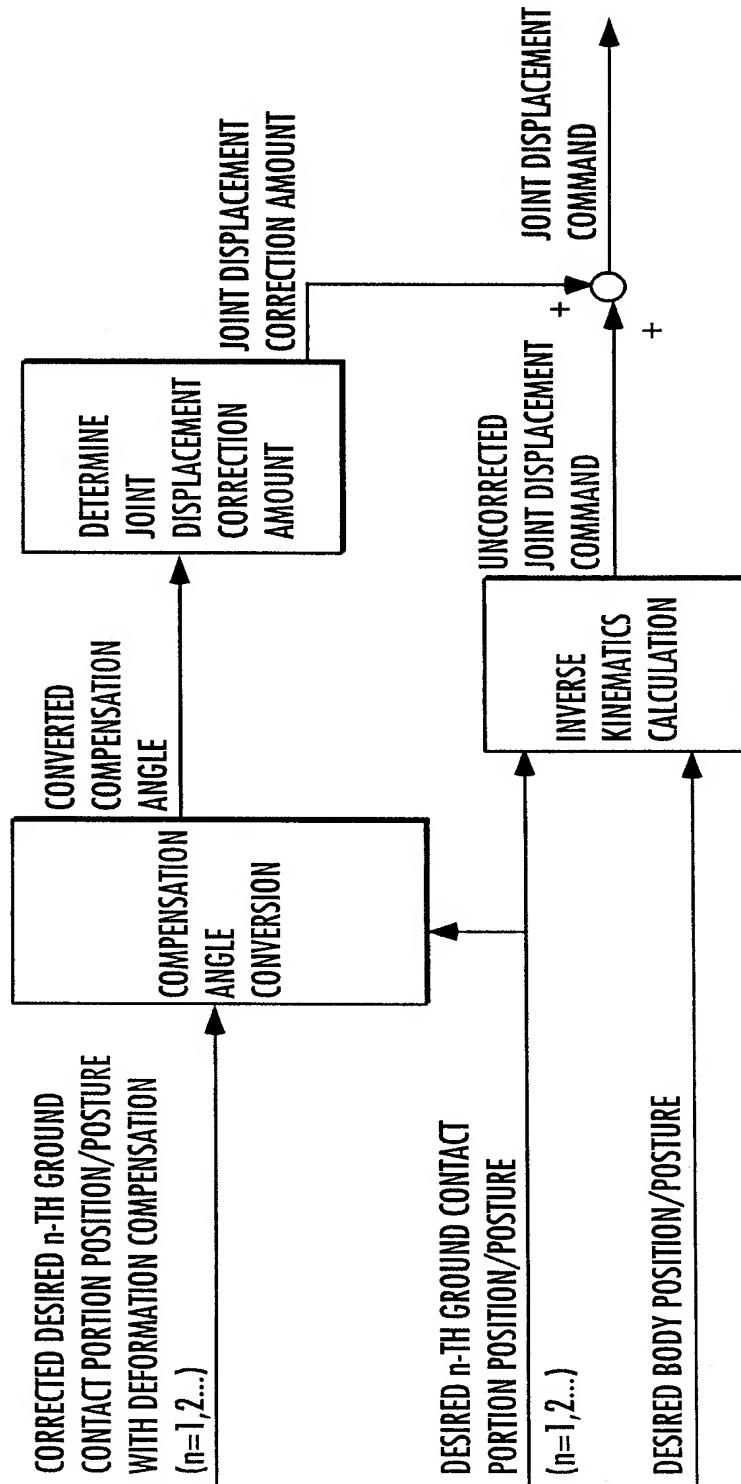
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FIG. 65



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FIG. 66



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FIG.69

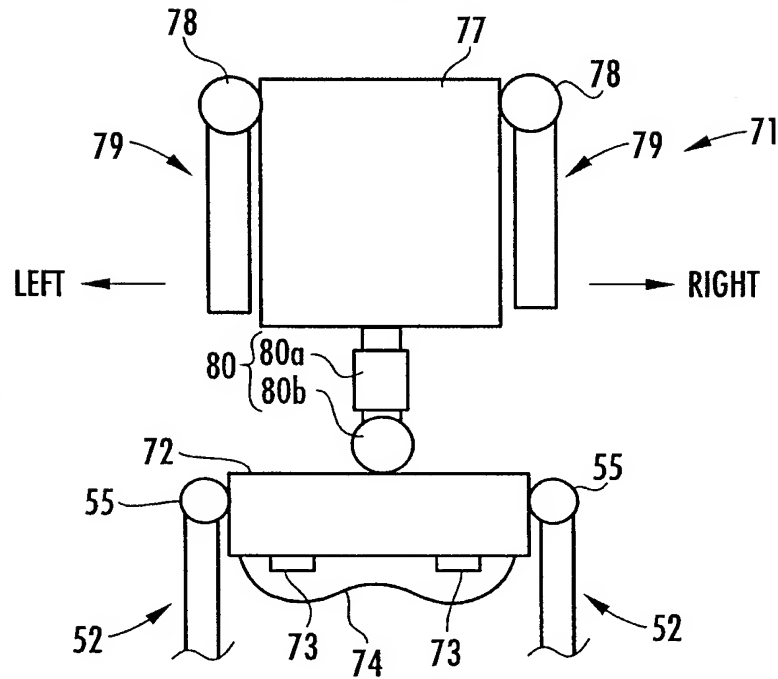


FIG.70

